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October 15th, 1953

A. I. M. E. Fall Meeting Sparkling Success

Wilmington Pool Paper and Directional Drilling Panel Featured

The recent fall meeting of the American Institute of Mining and Metallurgical Engineers, Pacific Petroleum Chapter, October 1, 2 at the Ambassador Hotel was one of the most successful ever held. Equipment displays in the Ambassador Gold Room and technical sessions in the theater held the keen attention of over 450 petroleum engineers.

Under the general chairmanship of Morton T. Higgs, the two-day meeting was highlighted by outstanding technical papers and panel forums. The meeting was climaxed with the annual banquet and dance in the Embassy Room.

Two nationally noted speakers addressed the meeting on non-technical subjects. Dr. R. E. Vivian, University of Southern California and Dr. Cyril S. Smith of the University of Chicago.

Gordon Jackson, vice president of Eastman Oil Well Survey Co., acted as moderator of the slant-hole drilling forum. Members of the panel were D. S. Johnston, Signal Oil and Gas Co.; J. T. Ledbetter, Union Oil Co.; Carl Vogelsang, Long Beach Oil Development Co.; Leonard Graves, Southwest Exploration Co.; and E. M. Benson, Richfield Oil Corp.

"Oil Base Emulsion Drilling Fluids, Their History, and Laboratory Evaluation of Their Characteristics," Charles Wright, Oilwell Research, Inc.

"Performance of Upper Terminal Zone, Fault Block III, Wilmington Field," George August and Stuart N. Davidson, Long Beach Harbor Department.

"A Description and Analysis of an Efficient Continuous Flow Gas Lift Installation," A. F. Bertuzzi, J. K. Welchon and F. H. Poettmann, Phillips Petroleum Co.

"A Contribution To Electric Log Interpretation In Shaly Sands," A. Poupon, M. E. Loy and M. P. Tixier, Schlumberger Well Surveying Corp.

"Improved Hydraulic Rodless Pump Performance Through Use of Electrical Sediment Separator," R. E. Phelan, Shell Oil Co.

"Study of Undersaturation during Repressuring and Supersaturation during Flow of Oil to Wells," R. V. Higgins, U. S. Bureau of Mines.

"Method of Calculation Recovery of Light Hydrocarbons by Gas Cycling Semi-Depleted Dark Oil Sands," C. N. Simm, Calif. Research Corp.

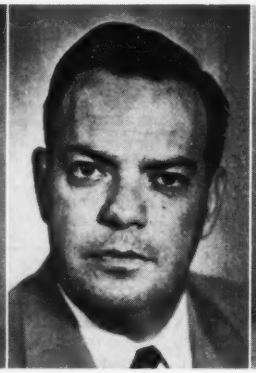
Stuart N. Davidson and George R. August, Long Beach Harbor Dept., authors of AIME paper on Wilmington Pool.

A. I. M. E. Authors and Panel Forum Members

R. V. HIGGINS
U. S. Bureau of Mines

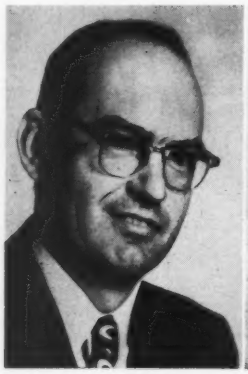
LEONARD GRAVES
Southwest Exploration Co.

C. N. SIMM
California Research Corp.



CARL VOGELSANG
Long Beach Oil Development

D. S. JOHNSTON
Signal Oil & Gas Co.



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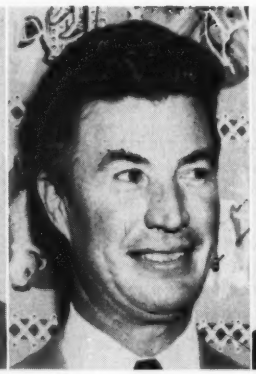

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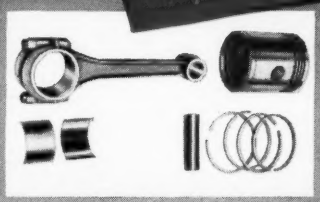

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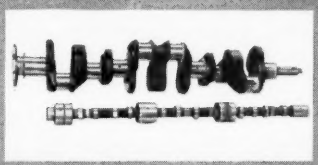
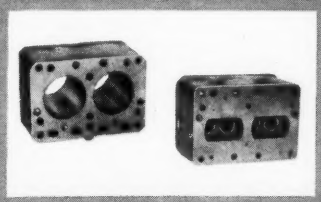


Crankshafts and camshafts are of heavy section design, extra-large bearing area



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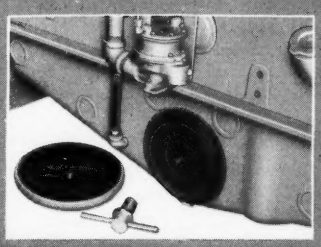

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Boiling Point Cooling Systems

By
Gordon M. Jackson,
Drayer-Hanson Inc.

The title of this paper is intended to designate engine cooling systems in which substantially all of the heat rejected to the jackets is transferred as latent heat, causing a small percentage of the water to change into steam without change in the water temperature. Other names which have been suggested for this system include "Vapor Phase," and "Cooling by Ebullition." It is occasionally referred to as "High Temperature Cooling." This latter term, however, is more appropriately used to describe systems which are conventional in that the normal water quantity is circulated by a pump but at a temperature level higher than 212° and in which boiling is prevented or reduced by pressure.

Engine cooling by boiling is basically different from high temperature cooling in that boiling is encouraged in the jacket by eliminating so far as possible any differential pressures in the circulating system and by returning the water to the jacket without any intentional cooling. By inducing boiling, while still providing an ample flow of water, two new factors are introduced:

First, the rate at which heat is transferred from the hot metal to the water, is increased.

Second, the differential in temperature between inlet and outlet is reduced. The far-reaching effects of these factors will be touched upon later.

It has long been apparent that cooling by boiling is feasible. The old model "T" Ford, perhaps unintentionally, employed this system whenever exposed to a slight overload on a warm day. Literally, thousands of engines have been built in which the water circulates without benefit of pumps. In most such engines the heated water and possibly some steam pass together to a radiator in which the steam is condensed, the water is cooled, and the cool water flows back to the engine. These systems, however, are rarely entirely satisfactory because they usually depend on differential temperature to secure circulation. If the radiator is big enough to insure proper functioning in hot weather at heavy load, it is too big during light loads in cool weather.

The water is then cooled far below the boiling point and a wide temperature difference prevails between inlet and outlet.

It was not until a separator was placed in the system that cooling by boiling started to come into its own. Some of the early installations of this system were made in the late thirties and early forties by the City of Visalia on Enterprise engines, by Richfield on Hall Scott engines and by Continental Oil Co. on Clark 4-cycle engines. In spite of very little prior testing or experience these installations were completely successful. In all of the larger early installations, pumps were used and high circulating rates maintained. As the pressure on the water prevented boiling excepting near the outlet, these installations were not strictly within our definition. They did, however, point up the advantages of elimination of cylinder condensation and generation of useful heating steam. Many installations of this type were made in sewage disposal plants where the maintenance of liner temperatures above the dew point eliminated corrosion from sour fuels and resulted in maintenance records at least as good as in comparable engines burning sweet gas. Other installations using separators and circulating pumps were made on practically all makes of engines, in power plants, saw mills, mines, chemical plants, ships, gas booster stations, power oil pumping plants for hydraulic pumping of oil wells, and in many other services. Circulating rates varied from .3 to .5 of a gallon per minute per horsepower. Pressures on the separator varied from atmospheric to 15 PSIG and the differential between inlet and outlet was usually between 5 and 9°F. This was the general state of development when the extremely valuable work by Mr. O. B. Freeman of the Tide Water Associated Oil Company at Ventura, demonstrated the feasibility and desirability of eliminating the water pump on larger engines. Mr. Freeman's experiments and experience were most ably described in his paper presented before this Association last January.

Interest in Mr. Freeman's work was immediately apparent among the engineers and operators in the gasoline industry. Installations without pumps were made by local companies on Cooper Bessemer, Clark, and Ingersoll Rand gas engine compressors in sizes from 165 to 2000 H. P.

An elementary form of boiling point cooling system is shown in Figure 1. Essentially there is an engine, a separator of appropriate size and design, and a condenser. In the simple form shown here, there is no water circulating pump

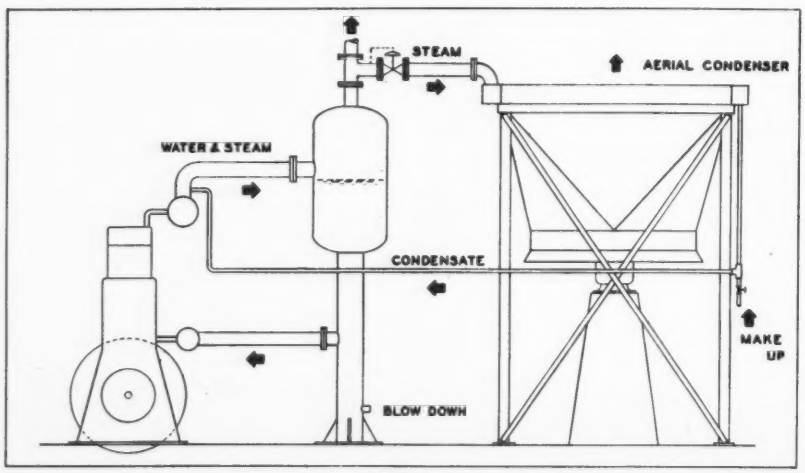

FIGURE 1

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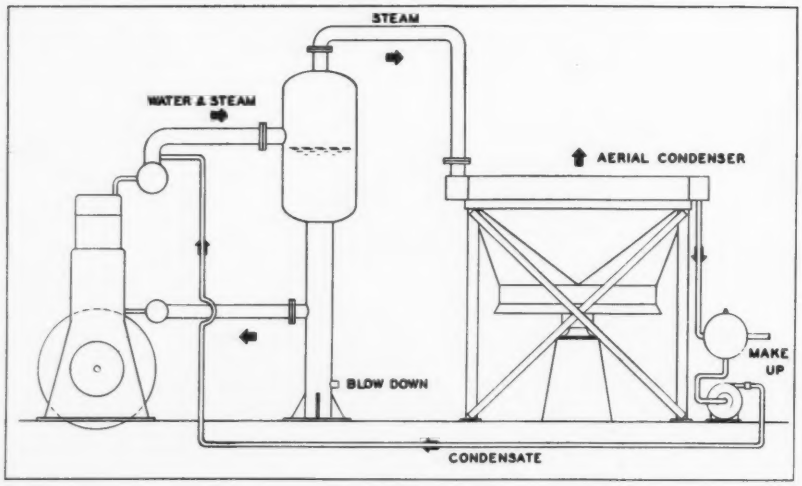

FIGURE 2

and no condensate return pump. The water flows through a line of adequate size to permit a natural flow of about 35 to 50 pounds per horsepower per hour at normal load or approximately 12 to 20 pounds of water for each 1000 BTU rejected to the jackets. This water is not cooled except by line radiation and consequently it enters the jacket at, or close to, the boiling point. In the jacket, as heat is transferred, the water rises in temperature, perhaps one or two degrees, till the boiling point is reached. As the amount of heat required to heat this quantity of water through one or two degrees is very slight, boiling begins in the jacket almost at once. As the water rises and comes in contact with the warmer metal of the liner, the formation of steam bubbles becomes more rapid but there is no further change in temperature of the water as only latent heat is being transferred. The violence of this action, causing extreme turbulence and scouring of the metal surface, produces exceedingly high heat transfer rates and insures thorough and uniform cooling of all hot surfaces. The density of the water and steam mixture from the point where boiling begins up to the separator entrance is, of course, much lower, due to the presence of the steam bubbles, then the density of the column of water in the separator and in the return line and it is this difference in density that insures the rapid circulation of water through the jackets. The steam which is separated from the water in the separator passes upward through a drying section to the condenser where the latent heat is removed by a suitable coolant, usually dry air in the Southwestern States, or by water and air in an evaporative cooler. The condensate is then returned to the system by gravity.

This is, of course, a very simple form of this type of system. Some variations will be discussed later but first it might be well to note that what is now being done in this system is a perfectly logical culmination of a trend that has been apparent for years. Not so many years ago it was normal cooling practice to heat the jacket water through perhaps 25° from say, 115° to 140° F. Through a series of gradual steps over the last 30 years this practice has changed till now it is common practice to circulate much more water, giving a higher velocity in the jackets and a closer temperature differential. As this gives more uniform metal temperatures, it has been found safe and desirable to run the water temperatures up to 150° to 160° or perhaps a little higher. In recent installations at least one Texas gas company is circulating 1 GPM per horsepower with about a 5° temperature difference. These high circulating rates give excellent results but at a mounting cost in pumps, manifolds, piping, controls, and horsepower. Now we note that the triple objectives toward which these operators are striving are (1) higher transfer rates resulting from high water velocity; (2) lower differential water temperatures; and, (3) higher jacket temperatures to reduce cylinder condensation. The system herein described carries this trend to its ultimate conclusion. With cooling at the boiling point we obtain:

1. Still higher heat transfer rates.
2. Negligible water temperature differential.
3. Metal temperature of liner above the dew point eliminating cylinder condensation.

For the benefit of those who have not recently reviewed the subject of heat transfer, let us refresh our minds on one or two elementary points. Latent heat is, by definition, the heat which is required to be applied to a liquid to cause it to change from liquid to vapor state. In the case of water at sea level it takes nearly 1000 British Thermal Units (or BTU) to convert one pound of water to one pound of steam without changing its temperature. So long as heat is applied to a stream of water which has already been heated to the boiling point, all of that heat will keep changing water into steam, provided, of course, the boiling point is not allowed to change by increasing the pressure and also provided there is always excess water present. In boiling point cooling systems an ample flow of water is insured and the difference in pressure at various parts of the jacket does not vary significantly. We, therefore, have the basic conditions which can only result in the formation of steam in the presence of water without appreciable change in temperature.

It has long been recognized that the rate at which heat is transferred from a metal surface to water below its boiling point is normally a function of its turbulence which in turn varies with the viscosity and the velocity over the surface. In engine jackets the water temperature is relatively high giving a low viscosity but with conventional cooling, the surface velocity is not usually high. Transfer rates from liner to water in conventional systems are therefore usually in the region of 300 to 600 BTU per square foot per degree of temperature difference per hour. With boiling water, however, the corresponding coefficient with clean surfaces is in the region of 2000 to 3000 BTU/SQ.FT./°MTD/HR. It,

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therefore, follows that the hottest spots will be more effectively cooled when they are being actively scrubbed by boiling water than they could be by contact with low velocity water under conditions which attempt to eliminate boiling. It also follows that with uniform temperature of coolant throughout the jacket, there will be a more uniform temperature of all jacket walls, tending to reduce the stresses which inevitably result from uneven expansion and contraction.

From the standpoint of relative economy it is usually difficult to show any substantial first cost saving in comparison with conventional cooling systems on small engines or on medium sized engines equipped with honeycomb radiators. Some savings can usually be shown in pump maintenance and in fan horsepower. In larger installations, especially those having central pumping units and large size aerial coolers, a boiling point cooling system usually costs less to install than a conventional cooling system. Auxiliary horsepower is also substantially reduced.

The related subject of waste heat recovery by the use of this system will be covered by a later paper and hence will only be referred to in a general way. Separator pressures are feasible and common up to about 15 PSIG, thus making available from 2 to 3 lb/hr. of steam per horsepower not including steam which can readily be generated from the exhaust. Mr. Freeman of Tide Water Associated Oil Company has reported pressures as high as 26 PSIG operation. Members of this apparent change in engine operation as compared with his usual 10-12 PSIG operatioin. Members of this Association are currently using this steam for heating crude oil in dehydrating units, for boiling Kobe pumping oil and several other heating services.

The relative merits of installing one separator for each engine as against one common separator for several engines may deserve a word of comment. In some cases there may be a slight saving in using one common separator. Most operators who have had considerable experience with this system seem, however, to prefer one separator for each engine. This eliminates any disturbance in the system when one engine is shut down and the volume of water in the jackets shrinks. Separate units can usually be installed closer to the engine resulting in less radiation loss and closer temperature range. The usual advantages of unitization from the standpoint of plant expansion and contraction also apply.

In Figure 1 an elementary form of boiling point cooling system was shown. Figure 2 shows a similar system in which it was not convenient to elevate the condenser. A hot well tank is, therefore, used to collect the condensate from which it is pumped back to the line leaving the engine. As the condensate may be sub-cooled, especially in cool weather or during periods of light load, it is desirable to introduce it into the line carrying water and steam from the engine to the separator. As the cooler water mixes with the hot water and steam, some of the steam is condensed and the condensate heated. If this were not done, the water returning to the engine might be cooled through several degrees below the boiling point.

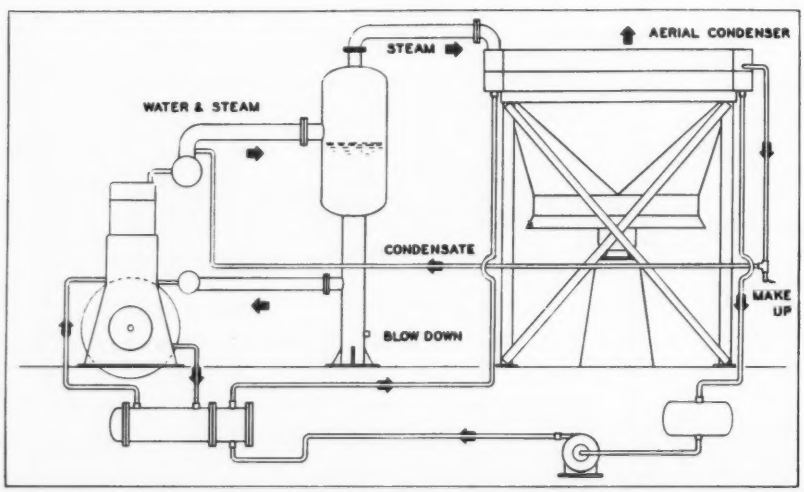

FIGURE 3

The installation shown in Figure 3 utilizes the aerial cooler for cooling a stream of water in a closed circuit which is pumped through the lubricating oil cooler. As the heat rejected to the oil is small in comparison with the heat from the jackets, the air stream is not raised much in temperature and can, therefore be economically re-utilized for condensing the steam in the upper coil.

Automatic controls in this system are simple and inexpensive. Safety valve, pressure gage, sight glass and low level switch are standard equipment. The low level switch is usually used to ground the magnetos but can be used to operate a relay or sound an alarm or flash a warning light. Automatic level control is optional. In a tight, closed system, the normal water loss is so slight that many experienced operators prefer to check the level periodically, introduce make-up by hand, and keep a record of the amount used.

In summarizing, we find that the chief merits of BOILING POINT COOLING SYSTEMS, especially those which apply to medium and large sizes of gas engine compressors, are:

1. Reduced cylinder condensation.
2. Reduced liner distortion.
3. More uniform liner diameter.
4. Reduced liner wear.
5. Reduced sludging of lubricating oil.
6. More uniform cooling of cylinder heads.
7. Uniformity of jacket temperature in spite of wide change in load or ambient temperature.
8. Simplicity of control and instrumentation.
9. Elimination of circulating pump first cost and maintenance expense.
10. Reduction in auxiliary power consumption.
11. Reduction in installed cost of cooling system.
12. Availability of waste jacket heat at a useful temperature level.

Presented at 28th Annual Fall Meeting C.N.G.A.

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THE GRAPEVINE

A few Saturdays ago we mounted the family chariot and streaked out to La Canada where we picked up Ray Sprague, the drilling contractor, then dashed over to Pasadena and took aboard Ralph Clemons, the noted Bethlehemite, after a quick look at his out-of-this-world camellias. Together we three then headed for the Daniels estate where we found Earl busy over the brazier, cooking up an appetizing mess of pottage for his eagerly awaiting boss, Frank Seaver. Presently we were joined by that tireless and always entertaining individual, Ham Bell, all decked out in safari regalia, and after a delectable repast during which the talk veered to old times in Tampico and Frank Seaver and Ham Bell came mighty near establishing some sort of family relationship, we departed in fine spirits for the deeps of Brea forest and the Petroleum Club safari.

We should mention, however, before we abandon the Daniels home that it is a most beautiful place, tastefully and enticingly decorated and furnished, and surrounded by shrubbery and greenery that not only add distinctly to the attractiveness of the total ensemble but also add amazingly to the vocabulary of Mrs. Daniels. This lovely lady rips off the multi-syllabic Latin names of all her bushes and plants with the placid ease of a botany professor and, indeed, captures occasional trophies at the local flower shows for her expertness in the horticultural arts. Earl's kitchen and dinner also constitute a work of art that is not to be glossed over lightly. It is completely fitted with the accessories and accoutrements of a short order cookery and combination men's lounge, and we can't imagine a nicer spot for a man to lounge. The furnishings were nearly all made by Earl in the woodworking shop that is immediately adjacent. This extra compartment or perhaps more properly, department, is a lovely addition to a lovely hostelry and in it we were right royally entertained before we scampered off to join the other big game hunters at Barneson Park.

This safari at which some 300 Petroleum Club members and their friends disported and cavorted in abbreviated pants, helmets, and other African regalia, was a most enjoyable affair. To Jim Kelley goes the major share of the credit for the arrangements, with Ed Stout functioning adequately as chief procurement and disbursement officer in the food department; Roy Johnson and Jim Hughes in charge of entertainment; and sundry other members lending their efforts to build up a program of exercises and diversions that were both educational and entertaining.

Wendell Jones, disguised as Lobengula, Matabele Chief, attends Petroleum Club Safari.

For exceptional prowess in various scheduled games, rare prizes were presented by M. C. Wendell Jones who came to this Boer whingding disguised as Lobengula, the Matabele Chief, and if Lobengula had been there himself, you couldn't have distinguished them apart. We noted that C. H. "Tut" Tuttle, Standard Oil Company's famed fiddler was awarded a live duck for proficiency in gin rummy and double stringing on his Stradivarius. He is now checking to see if there is any truth in the scientific contention that water runs off a duck's back like water off a duck's back. Ham Bell was an easy first in the hash slinging and quartet leading department and was awarded a Rhode Island Red chicken which was just about as much startled as Ham. Incidentally, the chicken, despite its name is not now and never has been a member of the communist party. Al Gareri was the proud winner of a 100 lb. sack of garden tonic for his facility in the dispensing of laughing waters and expects in future to be growing the biggest and strongest dandelions in his neighborhood. While the more restless members of this strange conventicle milled about the microphone and tossed discordant strains into the ether, there were those like Bill Geis, Paul Terry, Elmer Wycoff, John Flanagan, Wilbur Rankin, Frank Barton, Paul Andrews, and many others who found amusement in dominoes or the distribution and arrangement of cards with vari-colored designs. It was all so diverting that the safari is practically a cinch to become an annual Petroleum Club event.

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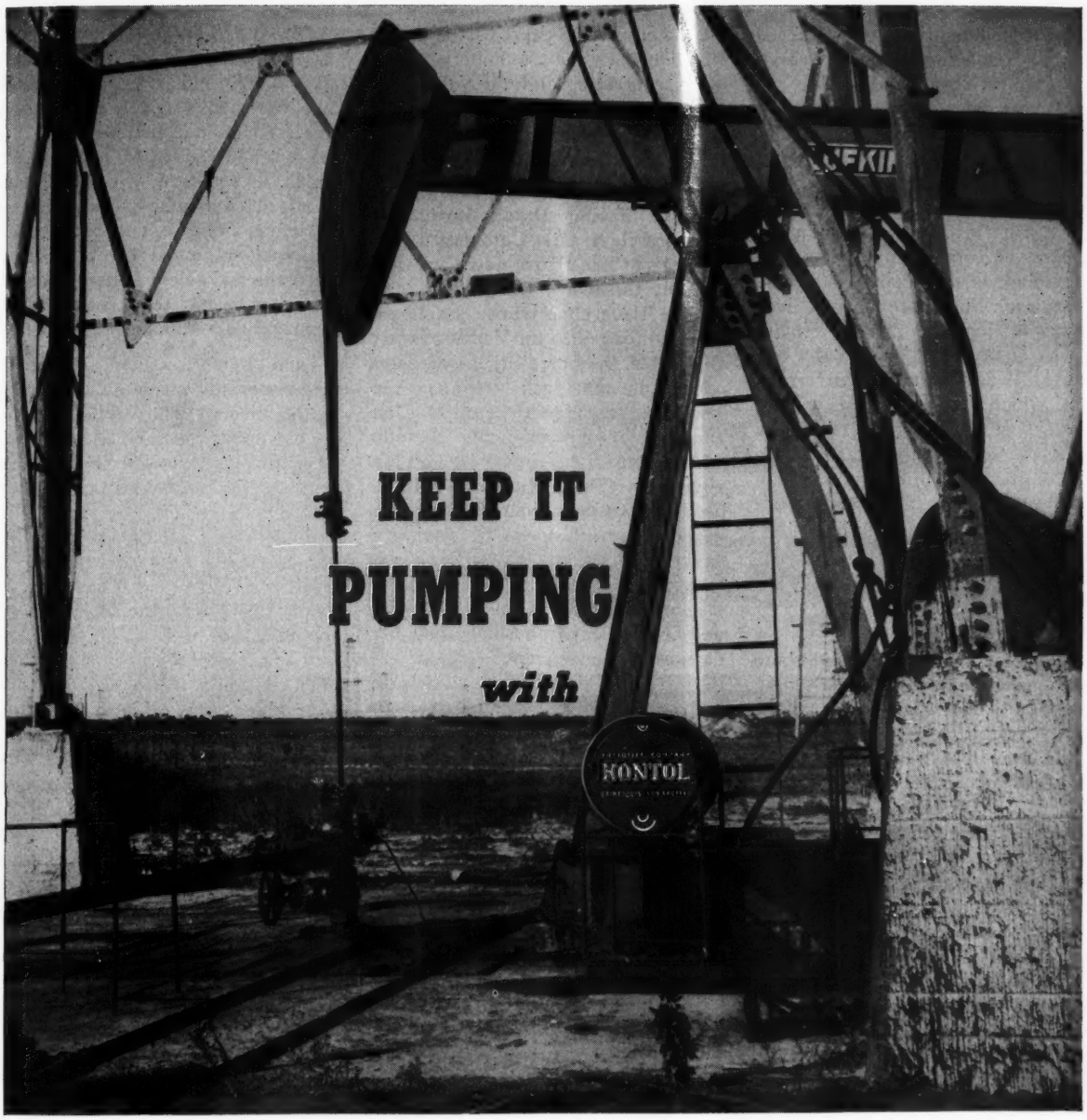
and particularly that part of the social life which enmeshes the petrolic people, that there has recently been organized up there an institution, entitled the "Petroleum Barbecue Associates of Ventura." This culinary coterie includes many of the most substantial people in the village and their prime objective is to handle every consequential barbecue that takes place within the confines of Ventura County. To do this and do it adequately, they have built and equipped a trailer kitchen that is literally the last word in what might be termed chuck wagon evolution. It is about as compact a mobile unit as you are ever likely to see and the boys who are responsible for it are so proud of their accomplishment that—well, they just don't speak to every Tom, Dick, and Algernon, and they are mostly experiencing a decided tightness in the vicinity of the hatband.

The thing must have cost a small fortune as any appraising eye might see at a glance. It was originally built for the Government and was used for a while at White Sands but it has been rebuilt to the peculiar specifications of a group of men who know by long experience exactly what a perambulating kitchen should contain, and the vehicle is likely to play an important part in the gustatory future of Ventura. Barbecue Associates purchased the trailer for $1350 and what they have done to it in the meantime must have made it worth $50,000. The financing of the deal was aided by oil and equipment companies in the area and the men who really did the fund raising were Martin Mears, Tide Water drilling superintendent; George Ruggels, CCMO manager; and, of course, Fritz Huntsinger, president and owner of Ventura Tool Company.

The trailer contains enough kitchenware to take care of 1500 people and the cutlery was made in Germany to the special order of the group. All pots and pans are of heavy gauge aluminum, boilers are of stainless steel, chopping blocks are of laminated maple, and everything fits so neatly and securely into the trailer that the very minimum of space is required and nothing can shake loose to jangle or vibrate. Among the oil men who are members of Petroleum Barbecue Associates, besides the three mentioned, are Harold Hassel, manager of Richfield's Ventura division; Clarence Froome, Union Oil Company's Santa Paula superintendent; Darrell Raysor, local manager of Eastman Oil Well Survey Company; Bill Bates, district manager for Shell; Ed Gallagher, division superintendent for Shell; Fred Miller, district superintendent for Continental Oil Company; Ben Turner, production superintendent for Lloyd Corporation; Katz Kaiser, district manager for National Supply Company; Don Sweet, chief petroleum engineer for Richfield; and Pat Patton, district superintendent for Texas Company in Santa Paula. Also included are such well known Ventura citizens as Adolph Fluetsch, vice president and manager of the Bank of America, and Walter Fourt, superior judge, Ventura County.

PETROLEUM BARBECUE ASSOCIATES OF VENTURA: Standing in the back row, from left to right: Darrell Raysor, manager, Eastman Oil Well Survey; Wm. F. Bates, manager, Shell Oil Co.; A. A. Fluetsch, vice-president and manager, Bank of America; Ed Gallagher, division superintendent, Shell Oil Co.; Walter Fourt, superior judge, Ventura County; Fred Miller, district superintendent, Continental Oil Co.; Ben Turner, production superintendent, Lloyd Corp.; Katz Kaiser, district manager, National Supply Co.; Don Sweet, chief petroleum engineer, Richfield Oil Corp.; Pat Patton, district superintendent, The Texas Co., Santa Paula. Seated, from left to right: Fritz Huntsinger, president and owner, Ventura Tool Co.; Harold Hassel, manager, Richfield Oil Corp., Ventura Division; George Ruggels, manager, C. C. M. O. Co., Ventura Division; Clarence Froome, superintendent, Union Oil Co., Santa Paula; Martin Mears, drilling superintendent, Tide Water Associated, Ventura; and Walt Hanline, superintendent of British American, Ventura.

These gentlemen are a part of the barbecue venture because of their simple love of the culinary arts. The whole deal is strictly non-profit and the Associates plan to perform for any gathering in Ventura County without charge other than the actual expense incurred. They had their first workout at the API annual barbecue at Camp Comfort a while ago and really did themselves proud. We attended this affair ourself and were nearly trampled to death by one of the greatest surges of oil men ever to show up at one of these annual guzzles. The new trailer worked like a charm and so did all the committees. In fact we are willing to go on the stand and testify under oath that the whole thing was excellent, thanks to Chairman Watt Lupton, and all his cohorts. We were specifically urged by the boys to give a special word of commendation to Bill O'Connor for his outstanding work on ticket sales and that we do without equivocation and we certainly wish we knew what the word means.



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DE-OILING • WATER FLOOD CHEMICALS KF 53-1

The other lunchtime we wandered into the Petroleum Club in search of a domino sissie and before we had succeeded in running a good one down, we bumped into that estimable soul, Paul Terry, the Capital Company higher-up, accompanied by one of his favorite Texans, to wit, Charles Beck, president of the Inca Drilling Company in Dallas. Chuck is not exactly a native of the Lone Star state, he just lives and has his business there. Actually he was born in St. Louis, Mo., attended Washington University, from which he graduated with a B A. in 1931, and immediately began his oil career with the Mark Twain Oil Company in Illinois as a sort of junior functionary. This experience so badly infected him with the hydrocarbon virus that two years later he launched out as an independent operator and has been at it ever since.

He moved to Dallas in 1951 and there incorporated the Inca Drilling Company which as nearly as we can figure drills mostly in its own behalf, and does a very successful job of it too. The firm has production in Oklahoma, Wyoming, and Illinois, and has a pair of very interesting records with 14 producers out of 20 attempts, and 5 lucrative wildcats out of 10 ventures in scattered areas. We forgot to inquire when Chuck and Paul first became acquainted but from the rash of reminiscences that sprang out of their meeting, it must have been just after the flood, and, mind you, we are not speaking of the Galveston Flood. Anyway, it appears that now whenever these two buddies are within visiting distance of each other, it is cause for a sort of reunion and we were pleased no end to be ever so briefly included in this one for the principals are mighty nice people.

With 750 more seekers after the light we journeyed to Bakersfield on October 3 for the Fall Barbecue of the Petroleum Production Pioneers, and as usual had the time of our young life exchanging chatter with men who have adventured in oil since the beginning of the century. Tal Ledbetter, doing his first stint as arrangements chairman, came through nobly. The food was good and plentiful, too, and there were many warm expressions of satisfaction with the affair at the close of an interesting and enjoyable session.

Hudson Drake, the Belridge PA had his usual competent group of jigger jugglers on hand, in the persons of Flying Dutch Lortscher, Signal Oil & Gas Company's top purchaser; Lee Laird, now Cardwell rep out thisaway; Chuck Ball, the Ball & Black chap whose junior we keep running into up Ventura way; Bill Bates, the noted Shell Company square dancer; Jack Freeman, the good looking Bethlehemite; Don Pinnell, the Union Pacific domino whiz; Rudy Schweitzer, Bob Pyle's right arm; Fritz Ripley, Jr., independent business man and a domino player with loads of boneyard savvy; Al Pruett, the collegiate looking Howard Supply chap; Dick Backman, Standard of Cal buyer; and Owen Cooper, a Shell Company delegate of consequence. These lads did a lovely job of tonsil limbering and helped no end to stimulate the recollecting glands of the pioneers.

Ed Stroud, the boss signer-upper was also ably assisted by a corps of competents that included Kenny Dale, Ed Cleveland, Dan Johnston, Harvey Menard and Harold Nissen from Signal Oil & Gas Company; Jim Hickey, Hickey Pipe & Supply Company; Harvey Sarver and Norm Schrank, Tryad Service, Inc.; Bob Saxton from Belridge Oil Company; Kelly Thorpe from Mills Iron Works; and Ken Faulkner, the noted Texas Company wildcat. And then there was Andy Anderson, the Oil Tool Corporation chap doing his directing stint faithfully as usual, and prexy Ben Anderson being everywhere and especially at the microphone to introduce the Valley old timers.

It seems rather foolish to attempt to name the people who attended but we heard one of his solos to remind us that Dick Guiberson was on deck. Among other celebrities, we spotted Reg Stoner, Jules Tousaint, Lin Little, Al Tietze, Ledger Smith, C. C. Scharpenberg, Bill Forker, W. M. Brown, and a raft of additional Standard Oilers; F. C. Ripley, Sr., the erstwhile CCMO chief; R. R. "Dick" Smith, retired National Supply higher up; Daddy Kline, the irrepressible 90 year oldster from Oil Well Supply; R. E. "Ed" Stearns, Universal Consolidated veep and Duke Follansbee from the same; Lew Stephens who first arrived in Bakersfield in 1902 and worked for CCMO from 1907 to 1951; Phil Reed, widely traveled Standard Oiler who worked around Maricopa, Fellows, and McKittrick, and was employed on Section 20 when the Lakeview gusher came in. He later went to Alaska, South America, and Mexico.

Then there was E. J. Miley, the noted operator whose oil adventures are legion and who found many of his old employees and associates in the gathering; and Joe Spellacy who came to Bakersfield in 1904, was with OWS at McKittrick in 1909, with Moran in Taft in 1910, and besides is related to one of our favorite people, Pete Garretson of Baker Oil Tools, Inc. Over at the Inn we ran into L. P. St. Clair, former president of Union Oil Company, looking very well but not quite able for the whingding. Others glimpsed in the throng were George Coffey, long time Universal Consolidated exec; Elmer Bolton, Ohio Oil Company great; Dave Caldwell, former Barnsdall biggie from Fallbrook; Ed Bartosh, the Bankline geological whiz, and John Flanagan, the rising young Johnston Tester; S. W. "Red" Hardison, famed flying horseman and daddy-in-law of Ben Anderson; Al Rosenleib, widely known Ohio Oiler; Charlie Allen, retired Continental executive; Neil Norris, former Loffland Brothers top man; and Walter Buaas, drilling contractor who has really made history.

Also recognized were O. C. L. Witte, the Quality Oil pioneer; John Augsburger, once with Macrate now with Tryad Service, Inc.; Fern Pressey, retired Union Oiler now a rancher up Santa Paula way; Jake & Julius Lehman, noted pioneer brothers; Stanley Minor, the Regan Bros. engineering genius; Ollie Branyon, GP's singing buyer, recently retired; and A. F. "Hoopie" Driskill, many years in foreign fields and widely known in Nomadic circles. We talked briefly to W. S. Fisher, a fine gentleman from up Coalinga way; Charlie Potter, another much traveled chap just back from a fishing trip at Klamath; Lou

Lufkin

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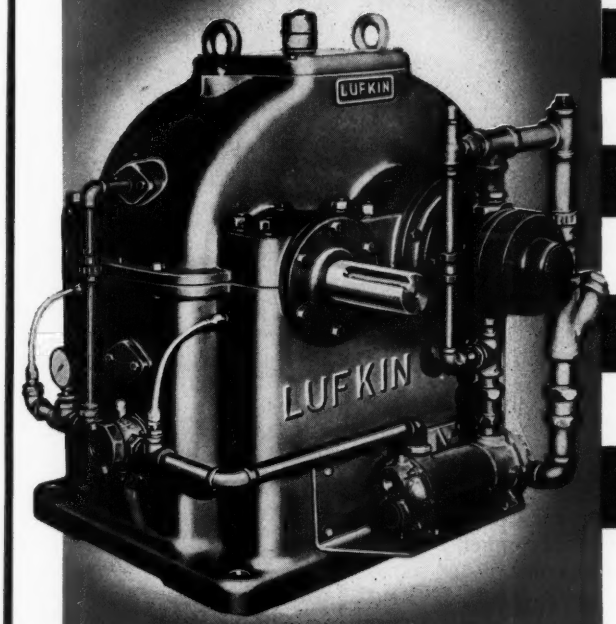

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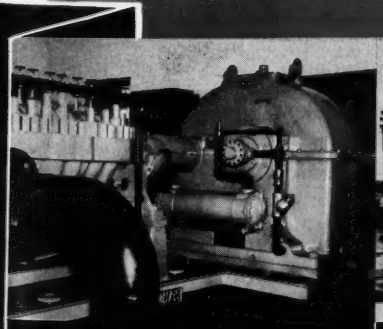

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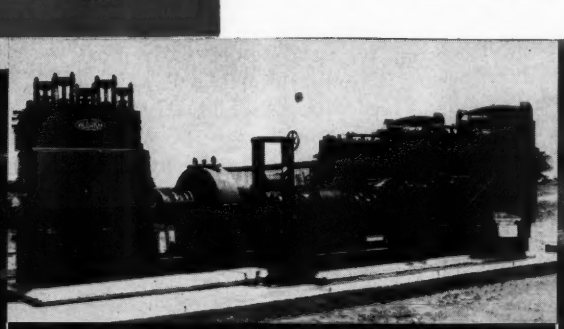

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Bronzan, one of the originators of PPP; Earle Boggess, the Baker export expert as usual hosting some interesting visitors; Waldo Moore of Cavins Company, reciting Satchel Paige's naive philosophies; Cotton Holder, the Loffland Bros. narrator; Ted Miles, the erudite head of Continental Consolidated and one of the industry's most elevating conversationalists; Glen Camblin, the Tret-O-Lite head man; John Cody, Superior production chief; Hut Erwin, the McCullough fishing whiz; John McEwen, the drilling contractors' No. 1 statistician; Rudy Hartmann, our old Union Oil buddy from Orcutt; J. H. "Horned Toad" Pinnell of Ohio Oil Company; and Bill Burcham of Bowen Fishing Tool Company who used to be one of our best salesmen when he was in Los Angeles.

This could go on indefinitely but with profound apologies to the 700 more or less we failed to mention, we must pause for station purification or something. We might remark that Joe Siegel, prexy of Tryad Service, Inc., and perennial membership chairman of PPP was busier than a bottle opener at a reunion of old grads, signing up new members. It was all pretty scrumptious, we would say, and there was much favorable comment from the folk who had the good fortune to be there.

Standard Announces New Pipe Line

Completion of a $4,000,000 petroleum products pipe line from Pasco, Wash., to Spokane was announced recently by T. S. Petersen, president of the Standard Oil Company of California.

The new line, constructed and to be operated by Salt Lake Pipe Line Company, common-carrier subsidiary of Standard, is part of a $48,000,000 oil supply system developed by Standard and its subsidiaries to serve the Intermountain and Inland Empire areas.

The system includes $21,000,000 in pipe line facilities from Salt Lake City through Boise to Pasco; a $16,000,000 refinery at Salt Lake, and a $7,000,000 crude oil pipe line supplying the refinery from Rangely field in Colorado.

"We believe the expenditure of such a large amount of money demonstrates what we expect in the way of growth in this region," Petersen declared, adding:

"Completion of this new line will give the Spokane area better service and will further assure the supply of vital petroleum products to customers in the Inland Empire. With a good deal of pride, we can point to the fact that we were the first to build a pipeline serving the people of the Spokane area."

Input of the Pasco-Spokane link will be supplied by the company's pipe line net from Salt Lake. Occasional barge loads shipped up the Columbia River also will be delivered to the new line.

Approximately 140 miles in length, the Pasco-Spokane line is eight inches in diameter and will have a through-put capacity of 15,000 barrels a day. Principal products to be carried are gasolines, heating oils and diesel fuels.

Union Announces Start Of Refining Expansion

Union Oil Company of California recently announced the assigning of contracts totaling $5,750,000 for construction at its Oleum (California) refinery of the initial unit in the Company's $40,000,000 program "designed to obtain more and higher octane gasolines" from its crude oils.

A contract with C. F. Braun & Company calls for completion of a Platformer by November, 1954. This is the catalytic reforming unit licensed by the Universal Oil Products Co. Construction is not expected to start before early next year. The Platformer will have a daily feed capacity of 14,500 barrels of gasoline stocks.

A contract with the Bechtel Corporation calls for construction of outside facilities, utilities, and tankage required for the Platformer operation.

In addition to this initial unit, Union's $40,000,000 program calls for a catalytic desulfurization unit, a coker, a sulfur removal unit and processing unit, a gasoline finishing unit and auxiliary facilities.

"The refinery program," said Reese H. Taylor, president, "is designed primarily to enable the company to obtain a still greater yield of gasoline and other high value products from our crude oil. The program will also enable Union to produce higher octane gasolines to meet projected demands for increase quantities of such gasolines."

Union Oil Company of California also will construct a 600-barrel-a-day catalytic reformer and other facilities at its Cut Bank, Montana, refinery.

Engineering and design work for the $600,000 project is well advanced, a company spokesman said. The reforming process licensed from the Atlantic Refining Company will "enable Union to produce even higher octane gasolines than have been available to motorists in that area."

Construction of the reformer and all auxiliary facilities will be begun early next spring by the Ralph M. Parsons Company of Los Angeles. All units are scheduled to be in operation by September, 1954.

In addition to the catalytic reformer, plans call for modification of the crude distillation tower to produce heavy gasoline as feed for the reformer, rundown lines, transfer pumps, tanks and other facilities needed to make the new unit fully operable.

Great Lakes Drills Wyoming Offset Well

Great Lakes Oil & Chemical Company of Los Angeles reported additional expansion of its field operations in states other than California. In Wyoming, the company is drilling below 2000 ft. with its Hawkins No. 1 on 320 acres offsetting the recently completed Pasternack No. 1, southwest of the Mush Creek field in Weston County. Continental Oil, Gulf Oil and Trigood Oil were reported among holders with land near the Great Lakes' project, which is aimed for the Newcastle zone around 7800 ft. Great Lakes also made known the acquisition of a joint interest with Prentice B. Mangus of Miami, Fla., of some 7600 acres of potential oil land no great distance southwest of the Hawkins property. An exploratory well is slated to be set in motion there shortly, according to Charles S. Hale, Great Lakes executive.

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Coalinga-Kettleman Chapter API Annual Barbecue Held on Sept. 16th

The Annual Barbecue started promptly at 7:00 P.M. following a day of sport for the golf enthusiasts. Blind-bogey and hole-in-one tourneys and cocktails were the features of the events.

Committee members whose hard work contributed largely to the marked success of the affair were: Food, Walter Boice; Barbecued meat, Bill Taylor; Serving, Gail Carbiener; Parking, Ralph Nabors; Entertainment, Whitey Rowland; Tickets, Chet McElwee; Golf, Basil Loftis.

Walter Boice and Gail Carbiener started collection of 1953 dues (netting 54 paid memberships) when they were interrupted by the opening of the evening's program.

Approximately 425 persons were in attendance at the Barbecue and guests and members were from Bakersfield, Taft, Los Angeles, Riverdale, Hanford, Lemoore, and other points.

The meeting was called to order by Chairman Jack Lemley, who welcomed the members and guests. He then introduced Jose Errotabere, Pres. of the Polvadero Country Club. Errotabere presented Basil Loftis, who was in charge of the API golf events. Loftis awarded the golf prizes as follows: Low gross was tied (score-73) between Clarence Clemens and Chuck Hoover. Hoover won the toss and received a handsome golf bag. Blind-Bogey was tied between Johnny Ayres and O. N. Andrews (score-70), each received six golf balls; Chief Dub award went to Johnny Norden (score 121), prize, fifth of whiskey; blind handicap prize, a golf bag, went to Edward Ramalho; Frank Loftis received a carving set for winning the hole-in-one, his ball tapped the pin and stopped a scant inch from the cup; second award went to Chuck Hoover.

Jack Lemley conducted the ham raffle with a net of $96.22.

Lemley turned the program over to Whitey Rowland, master of ceremonies for the remainder of the evening. A group of professional entertainers presented several numbers which were well received.

Personalities IN THE NEWS

Henning Heads Bakersfield Refinery of Standard

L. L. Henning has been named manager of the Bakersfield Refinery of Standard Oil Company of California, succeeding M. M. Moore, who has retired.

L. L. Henning

Moore, head of the Bakersfield plant for the past ten years, joined Standard in 1913. He began as a chemist in the company's El Segundo Refinery and later served in managerial capacities at both El Segundo and Richmond Refinery.

Henning, previously superintendent of the Richmond Refinery chemical division, has been with Standard since 1934. He started in the company's General Engineering Department and for the past 12 years has been in the cracking division at Richmond.

A native of Red Bluff, Calif., Henning grew up in Woodland, Calif., and graduated from Stanford University in 1934 with an A.B. degree in engineering. He took advance studies in chemical engineering at Massachusetts Institute of Technology.

Hal Bentson Named Chief Sales Engineer For Security Engineering

Hal G. Bentson has been promoted to newly created position of Chief Sales Engineer for Security Engineering Division, Whittier, California. Otto Hammer, president of Security, made the announcement.

Bentson, who assumes his new duties immediately, was formerly assistant chief engineer for the company. In his new position, he will devote a major share of his time assisting oil companies and drilling contractors in solving production problems.

Hal G. Bentson

Bentson joined Security in 1938, following his graduation from the University of California, where he obtained his degree in mechanical engineering. He has worked with drilling production tools in research, development, design, and field engineering departments, and has had considerable experience with oil well production problems. He is a registered professional engineer and is on the standardization sub-committee of the American Petroleum Institute.

Vaughan Joins American Pipe & Steel

H. K. "Brick" Vaughan, well-known in the California oil industry for over twenty-five years, has been appointed to the Oil Field Division of American Pipe & Steel Corporation, Alhambra, California, according to an announcement made by Carl B. Dahlberg, Vice President in Charge of Sales for this fifty-year-old steel fabricating company.

H. K. Vaughan

"Brick" Vaughan, a Mechanical Engineer, will specialize in the products and services of the company as applied to the oil fields of this state. His appointment represents a further strengthening of the engineering, sales and service staff of the Oil Field Division of American Pipe & Steel, the only West Coast manufacturer offering a complete line of production equipment to California oil producers and refiners. His headquarters will be at the Los Angeles office of the company, 727 West 7th Street.

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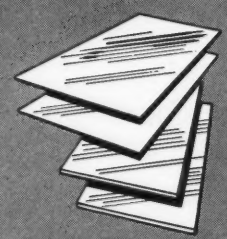
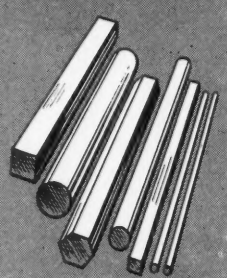


SHEET AND PLATE



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Gest Appointed to Los Angeles Post of Du Pont

The appointment of William B. Gest as the new assistant manager for the West Coast District of the Du Pont Company's Petroleum Chemicals Division was announced on Oct. 1st. He formerly was technical assistant to the director of sales in Wilmington, Del. John F. Shaw, whom he succeeds, has been promoted to assistant manager of the central district and will be transferred to Chicago in the near future.

Mr. Gest will report to George L. Tyler, manager of the West Coast District, with headquarters at Suite 560, 612 So. Flower Street, Los Angeles 17, Calif.

Wm. B. Gest

Mr. Gest, 37, started with Du Pont in 1941 as a foreman at the Kankakee, Ill., Ordnance Works. Later that year he was transferred to the Du Pont Company's affiliate, Remington Arms Company, Kings Mills, Ohio, as industrial engineer. In 1944 he was transferred to the atomic energy plant at Hanford, Wash., which the Du Pont Company built and operated for the government during World War II. From 1945 to 1947 he was assigned to industrial engineering work for the Engineering Department at various Du Pont plants. He joined the Petroleum Chemicals Division in 1947 at the time it was formed, and has been a sales service representative in Chicago, Toledo, Ohio, and Houston, Texas. Mr. Gest is a graduate of The Ohio State University.

Secretary of the Interior, Douglas McKay with (left) Dr. Gustav Egloff and (right) David W. Harris, President of Universal Oil Products Company, enjoying a moment of relaxation at Universal's recent party for members and guests of the National Petroleum Association, the Traymore Hotel, Atlantic City.

R. E. Donovan, manager of Standard Oil of California's safety division, presided at the recent Oil Industry Safety Conference held in Bakersfield, under the auspices of Western Oil and Gas Association. L. L. Aubert, association president, welcomed the delegates. Principal speakers were W. B. Curtis, General Petroleum Corporation, public relations and advertising director, and H. H. Hillman, president of California Production Service, Inc.

Elmer H. Weaver, Union Oil Company's manager of purchases, has been named assistant director of the Office of Defense Mobilization in Washington. Weaver, 59, will be responsible for determining the amount of materials needed for military and stockpile needs. Union Oil's President Reese H. Taylor said that Weaver will join defense planners only on a limited loan basis, and will not sever his 35-year association with the company.

Oilman Frank Ring has recovered satisfactorily from an illness that kept him hospitalized for several weeks. Frank, who makes his headquarters in Los Angeles, was among the earliest developers in fields at Signal Hill and Santa Fe Springs.

Huntington Hartford of Hollywood, owner of the great A. & P. grocery chain, is interested in buying the old Edward L. Doheny estate at Beverly Hills. If his efforts in this direction are successful, he plans to donate the estate to the city of Beverly Hills for a museum.

Korean Veteran Wins Axelson Scholarship

Bill Pulskamp, son of Mr. and Mrs. John Pulskamp of South Pasadena, California, won the first work-study scholarship awarded under a plan recently established by the Axelson Manufacturing Company, Division of Pressed Steel Car Company, Inc. Bill starts classes at the University of Southern California this week in the School of Commerce. He will major in Advertising, alternating studies at the University with on-the-job training at the Axelson plant.

Upon graduation from San Marino High, where he played football and tennis, Bill went into the Army, serving 9½ months of front line combat duty in Korea. Since his honorable discharge, he has been living in South Pasadena with his mother and father, two sisters Dionne and Judy, and a brother Nicholas.

The scholarship awarded to Bill is offered on a competitive basis to sons of employees of the Pressed Steel Car Company, Inc. Mr. Pulskamp, Bill's father works in lathe production control and has been with the Axelson Division for over twelve years.

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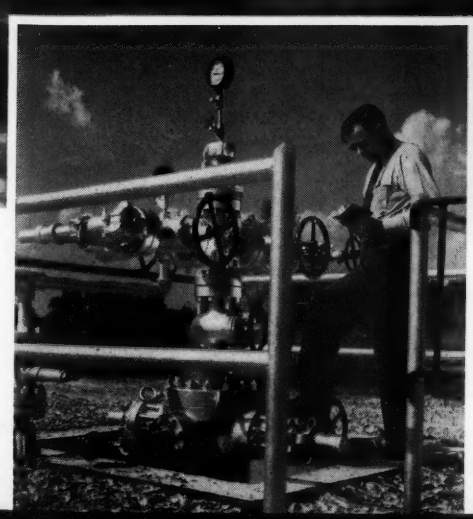

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NATIONAL OIL FIELD MACHINERY AND EQUIPMENT • SPANG STEEL PIPE • SUPERIOR & ATLAS ENGINES

September Meeting Basin Chapter A.P.I.

The September meeting of the Los Angeles Basin Chapter of the Pacific Coast District of the American Petroleum Institute featured an interesting talk on the Operation and Maintenance of Oil Field Gas Engines by Lester Billington, Assistant Superintendent of the Automotive Department of the Union Oil Company. Billington gave a detailed outline of the proper size, type, mounting, lubricants, settings and preventive maintenance program, which has resulted in considerable savings and long trouble free service of oil field gas engines.

Al Hunt, Chief Draftsman for the Wilshire Oil Company, presented his company's sound movie, "Rolling Rigs." A.P.I. members were greatly impressed with the engineering accomplishments achieved in moving giant, deep well rigs from one location to another, without dismantling.

E. M. Bensen, District Superintendent of the Richfield Oil Corporation, was elected Vice Chairman and head of the program committee of the Basin Chapter. Bensen replaces Marshall Turner of Continental Consolidated, who has been transferred to Oklahoma.

The chief speaker at the sixth annual Industrial Health Conference in Houston, Tex., was William L. Stewart, Jr., Union Oil Company executive vice president.

Russ Havenstrite, Los Angeles oilman, has been showing friends motion pictures he recorded on his recent trips abroad. They are titled "Stormy" and "The African Safari," respectively.

John Alfred Truett, recently named secretary to Harold L. Walker, division supervisor for Ohio Oil Company at Los Angeles, was formerly with The Texas Company. Earlier, he was with Time Oil Company and Warner Brothers Studio.

"Oil Well Logging Service" was the topic of an address by F. L. Bryan, widely known in San Joaquin Valley well surveying circles, before the Oildale Rotary Club.

Officers and speakers at the September meeting of the Los Angeles Basin Chapter of the A.P.I. (left to right): E. M. Bensen, District Superintendent Richfield Oil Corporation, newly elected Vice Chairman and head of the program committtee; Al Hunt, Chief Draftsman Wilshire Oil Company, who presented the picture "Rolling Rigs"; Lester Billington, Assistant Superintendent Automotive Department, Union Oil Company, the principal speaker of the evening, and J. T. Ledbetter, Division Drilling and Production Superintendent, Chairman.

Hilker Elected National President of S.A.I.E.

F. C. "Bud" Hilker, public relations and advertising manager for the Eastman Oil Well Survey Company at Denver, Colorado, was elected national president of the Society of Associated Industrial Editors at the organization's convention held in Omaha, September 23-25.

F. C. Hilker

Hilker, who has been associated with the Eastman company since 1948, is publications director for the company and has been active in SAIE in Denver for several years and is a past president of the Colorado editors' group.

His other activities in the oil industry include memberships in the Association of Petroleum Writers and he also serves on the Rocky Mountain District Committee of the OIIC in Denver.

Union Oil Company of California recently announced the following personnel changes in its manufacturing department:

Elmer B. Palmer, manager of the Los Angeles refinery, transferred to the Head Office.

Henry C. Meiners, manager of the Oleum refinery, will replace Mr. Palmer.

John W. Fowler, chief refinery engineer at Los Angeles refinery, will replace Mr. Meiners.

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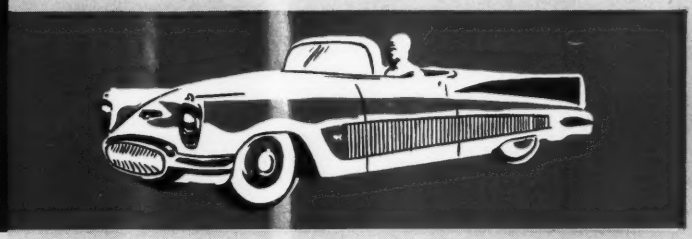

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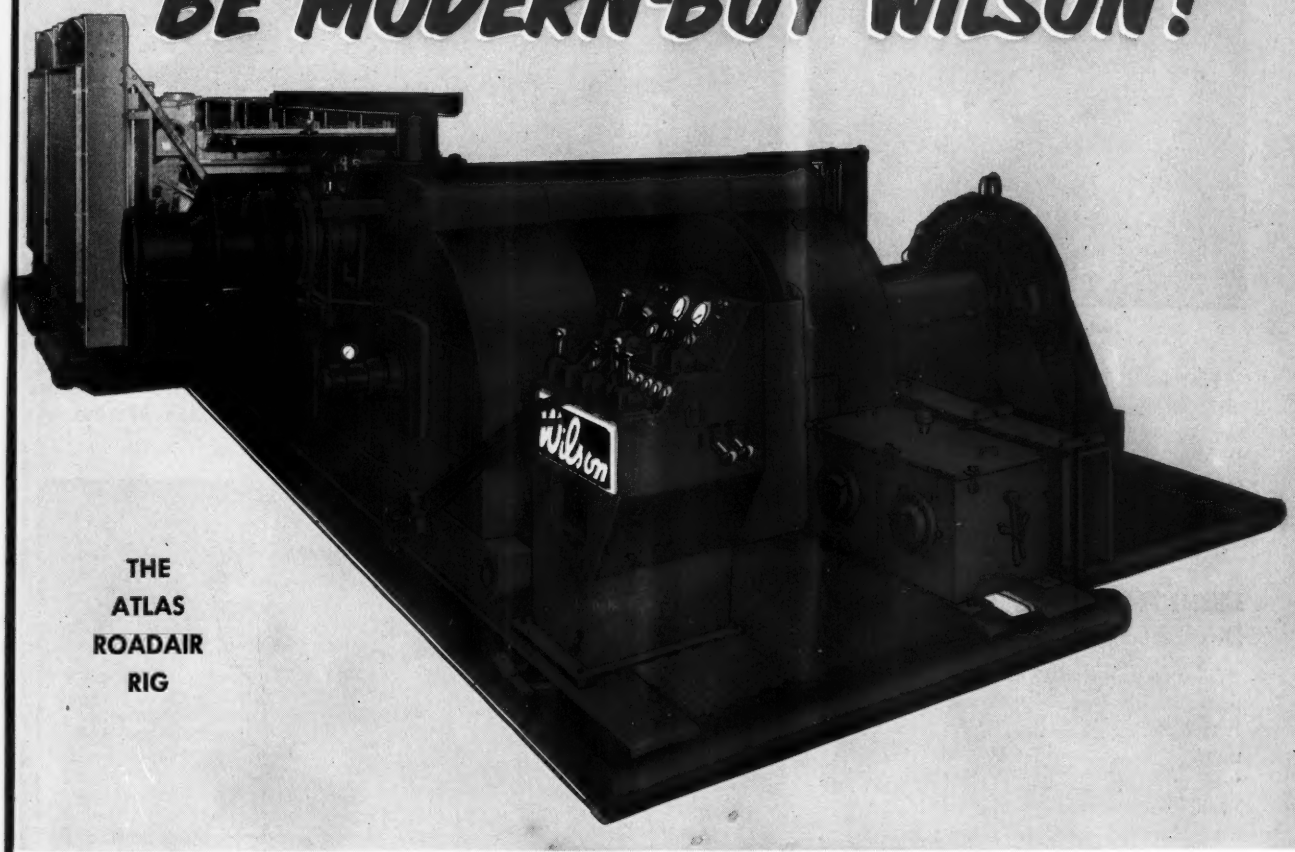

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Baash-Ross Names Hal Messinger as California District Sales Manager

Mr. E. M. Gearke, General Sales Manager for Baash-Ross Tool Company, has announced the promotion of Hal Messinger to California District Sales Manager for the Baash-Ross organization.

Hal Messinger

Hal is well known to California oil men, having operated for a number of years as Baash-Ross Sales Representative in the Los Angeles Basin Area, Ventura and San Joaquin Valley.

Elliott Heads New Dept. at Axelson

The appointment of Bruce C. Elliott as head of the newly-formed Axelson Market Research Department is announced by W. W. Greenway, Vice-President of Pressed Steel Car Company, Inc. and General Manager of the Axelson Manufacturing Company Division.

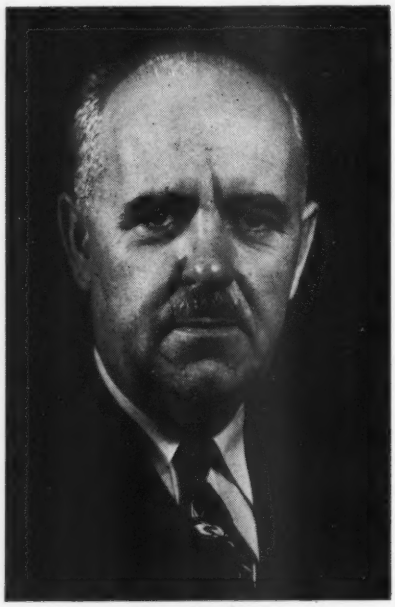
Mr. Elliott has been with the Axelson Aircraft Sales Division since 1949. In his new position he will be in charge of research activities for aircraft, petroleum equipment, lathe and foundry divisions. Mr. Elliott received his B. S. degree from the California Institute of Technology in 1938, followed by an M. B. A. from the Harvard Graduate School of Business Administration.

Atkins Heads New Emsco Department

In a trend to wider diversification of the Emsco line of oil field and related products, the addition of a swivel fitting department has been announced by William T. Powell, president of Emsco Manufacturing Company.

Emsco has acquired the swivel fitting business of the Rasmussen Manufacturing Company of Hollydale, California. These fittings formerly sold by them under the trade name Ramsco, will be known as Emsco Swivel Fittings.

Heading up the swivel fitting sales program will be E. R. (Pop) Atkins, long known throughout the oil industry. For over twenty-five years Mr. Atkins has been associated in the manufacture and sale of swivel joints, rotary heads and rotary pressure hose for both domestic and export markets. Pop Atkins, a member of the Nomads, will make his headquarters at the Los Angeles plant of the Emsco Manufacturing Company.



E. R. (Pop) Atkins
Mgr. Swivel Fitting Sales

At its September meeting the board of the Oil Producers Agency paid its respects to the late Ralph B. Lloyd. Rising in silent tribute the members of the board recorded that Mr. Lloyd had always held the respect and affection of the entire oil industry and the people of the state, as well as members of the agency.

Richard R. Von Hagen was elected as president of Lloyd Corporation, Ltd., to succeed Mr. Lloyd.

George Atha, leading geologist and Los Angeles Basin oil producer, expects to be ensconced in his beautiful new home at San Marino by November 1.

A $110,000 melon about to be cut. President Thomas P. Pike (second from right) confers with friends just before profit sharing checks start to roll. Left to right: Exec. V-P Stanwood I. Williams, Toolpushers Sim Protiva and Earl Kirkland, Tom Pike and V-P in Charge of Drilling H. G. Haney.

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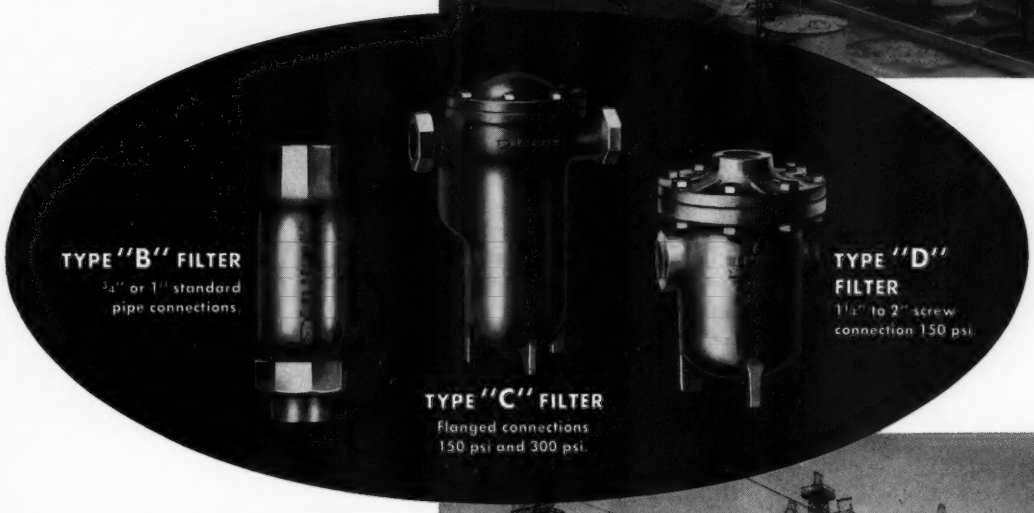
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¾" or 1" standard pipe connections.
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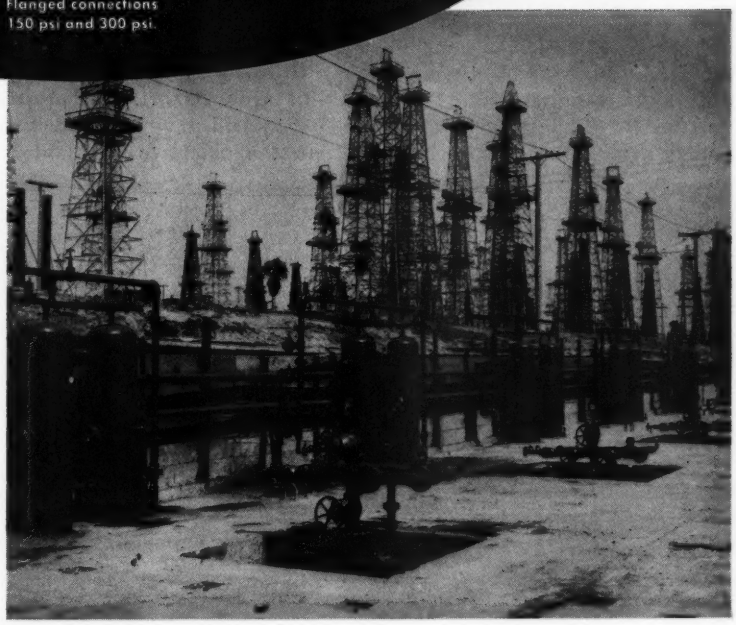

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Field Development

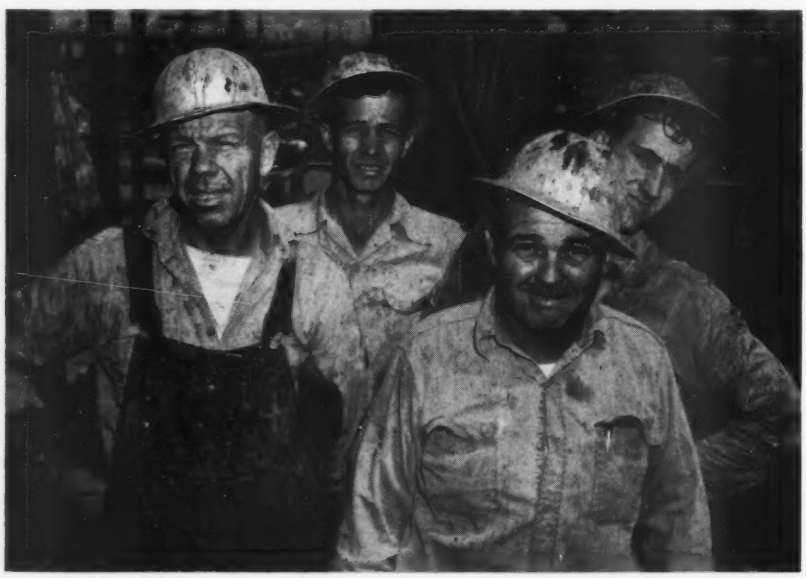
Tejon Hills Field Adds Fault Block Find

D. K. Partnership's Corral No. 335-28 well has accounted for a new fault block discovery in the Tejon Hills field. The well started off at the rate of 50 barrels of 32 gravity oil a day from some 35 feet of sand in the Tecuya zone, the first yield from this formation on the company lease on Sec. 28-11n-18w. Results of drilling the new well point to several possible additional locations on the property, in which Reserve Oil and Gas Company hold a 50 per cent operating interest. Total depth is 1906 ft., with plugged bottom around 1300 ft.

Bolsa Chica Oil Corporation's KCL No. 82-18 extension test on Sec. 18-30s-26e, southeast of production in the Strand field, is moving ahead in the earlier operational stages. This is the company's first drilling sortie in Kern County in some years. Production currently in the Strand field is from the Stevens oil sand zone.

On the Rosedale Ranch, about six miles northwest of Bakersfield, Standard of California appears to have clicked with a new zone discovery. Its KCL No. 31 on Sec. 1-29s-26e on formation test of the interval of 4685 ft. and bottom at 4717 ft. flowed at the rate of about 1200 barrels of 22 gravity oil a day from a deeper and hitherto untapped zone. Standard recently added to its property in the area by leasing 446 acres on Sec. 26-28s-26e from Lerdo Land Company. Western Gulf Oil Company has leased 425 acres on Sec. 21-28s-27e from the Mettler interests.

Standard also appears to have poked into something new with its Jeppi Camp No. 47-8 Edison extension test on Sec. 8-30s-29e. A formation test from 5917 ft. to 5936 ft. reacted with a flow of more than 400 barrels of high gravity crude oil a day. This is the company's first drilling job on the Jeppi Camp lease it acquired the other month. On the same section, Fischgrund & Shane's Drury No. 1 wildcat is making hole ahead below 2000 ft. The project is likely to drill to approximately 5500 ft. in the objective Pyramid Hills sand.



L. B. O. D.'s W-258 with Camay Drilling Company handling the job. Left to right: H. L. Branum, lead tong; John Collier, cathead; K. R. Smyth, driller; C. F. Timmerman, derrick.

TV Drilling Aid

TV cameras may soon become the newest addition to oil field equipment. Present engineering studies are seeking to determine if TV cameras can be so designed that drillers can take a "look-see" at operations on the bottom of wells. An apparatus of this kind is foreseen as saving much time and money for the industry. It would be particularly effective when drillers are fishing. TV cameras also would allow drillers to inspect the walls of wells all the way and make possible a close check on the different formations which the drill bits penetrated. Oil wells are not often more than six inches in diameter and in consideration of this TV cameras would have to be long and slender. A special camera for shooting still pictures of this type has been designed and is familiar to oilmen in some fields.

Tide Water Associated has recorded another abandonment on land one and one-quarter miles north of its Farnsworth No. 14-17 discovery well in the Lost Hills area. The venture, S. F. & F. L. No. 28-8 on Sec. 8-25s-20e, quit at 1928 ft.

Two wildcat wells in the Mount Poso area have been written off as dusters. The Harry H. Magee, Operator, Glide No. 3 on Sec. 35-27s-28e came to naught at 1350 ft. Intex Oil Company pulled out of its Glide No. 1 on Sec. 19-26s-28e at 1922 ft. Intex, by the way, is drilling another test in the area. It is Gill No. 1 on Sec. 24-26s-27e or a little less than a half-mile north of Caminol Company's Poso No. 1-18. This test of yesteryear was abandoned at 2218 ft. in November of 1939 in gray sand. The project encountered a number of stringers of oil stained sand.

On the Mabury-Still lease at Antelope Plains, Frank A. McDonald's No. 1 wildcat test on Sec. 11-26s-17e is digging in the relative-

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ly shallow stratum. Amerada Petroleum Corporation took down a couple of tests in the area without success several years ago. They went past the 4000-ft. mark.

Beer Nose Tested

Between fields at Devils Den and Blackwells Corner in the Beer Nose area, Shell Oil Company is moving ahead toward 1200 ft. with its No. 58-5 on Sec. 5-26s-19e. The wildcat is slated to peer and probe to approximately 4500 ft. Steele Petroleum, British-American Oil Producing and The Texas Company are among operators which previously have drilled in the sector.

Turning to San Benito County for a time, Oceanic Oil Company is drilling near critical depths with its Maggini No. 1 wildcat venture on Sec. 10-18s-9e, slightly less than two miles southeast of production in the Bitterwater field. W. W. Holmes, Operator, opened up the field in May of last year. Oceanic subsequently acquired an interest in the Holmes land.

In the Flint Hills near Hollister, Tide Water Associated is working in the primary stages with its Breen No. 1 on projected Sec. 19-12s-5e. The town of Hollister, by the way, is named for. W. W. Hollister, who came to California in 1852.

Green & Heiser, contractor, is about to spud Oceanic's Westates No. 1 extension test on Sec. 18-32s-23e in the Midway-Sunset area about four miles west of Taft. It is designed to go 5000 ft.

On the Cienega Anticline and about six miles south of Maricopa, Union Oil Company is preparing to drill Hudson No. 48-8 wildcat on Sec. 8-10s-23w. The well, located in hilly country, is slated to drill to 4000 ft. or so for a possible look at what the Eocene may promise. Universal Consolidated tried its luck in the area last year on the Time Oil-S. K. lease. However, nothing of interest was picked up.

An operating organization known as the Jacobson Oil Company has started the drill in Stewart No. 1 wildcat in the Shale Hills area. The well is on Sec. 32-27s-19e and a half-mile west of Fay Wright's Okay No. 1, abandoned at 2862 ft. in January, 1949.

Wheeler Ridge Find

The final touch has been given to Richfield Oil's Gordon No. 124-28 extension test on Sec. 28-11n-20w at Wheeler Ridge. Drilled to a bottom of 3831 ft., the project stands for the fourth new zone discovery by the company since it brought to light the Eocene pool at Wheeler Ridge. Completion was in the shallowest of the producing horizons, with casing set at 3743 ft. Three sand stringers were penetrated in as many intervals between 3327 and 3475 ft. in the Valv zone. The well evidently was bottomed in the Olcese sand for a satisfactory yield.

Gene Reid Drilling Company at last reports was testing uphole with its R.O.P. No. 43-30 wildcat well on Sec. 30-13s-17e at Herminghaus in Fresno County. Bottomed at 4900 ft., the project is on acreage acquired on a farmout agreement from Oceanic Oil.

West of the Lanare area, Gene Reid as this is jotted down is digging below 6500 ft. with J. K. Wadley-Swearington No. 1 test on Sec. 21-17s-18e, west of production in the Lanare area. It may be that the operator will take the well down as deep as 7300 ft.

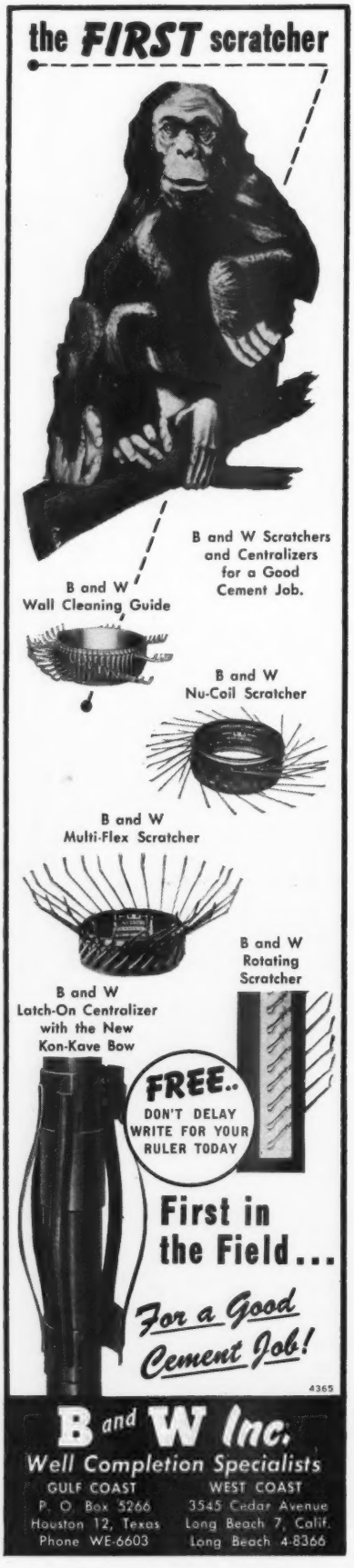
Gene Reid's next drilling job is likely to be Arnold No. 71A-15 on Sec. 15-12s-14e in the Moffat area of Madera County. Location is understood to be on a 14,000-acre farmout from Standard Oil.

Tide Water Associated has embarked upon another test in the Chowchilla sector with its Redman-Cook No. 58-4 on Sec. 4-11s-14e.

Brookline Oil Company has spudded in following the usual pattern of drilling ahead with its Travma No. 2 wildcat at Pyramid Hills, Sec. 8-24s-18e, Kings County. Contractor is Newton Drilling Company. Reserve Oil and Gas Company's Orchard No. 48-20 wildcat on Sec. 20-24s-18e is down 3800 ft. or so, following a battle with mechanical trouble. Notable gas shows were reported around 3800 ft.

San Luis Obispo County's Ballinger Canyon area is the scene of General Petroleum's Ballinger Canyon Unit No. 1 test on Sec. 31-10n-24w, which at present is down 9526 ft. and fishing.

Southeast of the main Russell Ranch field in the Santa Barbara portion of Guyama Valley, Richfield's, Russell A No. 74-8 on Sec. 8-10n-27w keeps digging at 2865 ft.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Edison

SOUTHERN CALIFORNIA EDISON COMPANY

Contractor Hayes & Sprague is getting deep with Richfield's Gonyer-USL No. 78-31 explorer on Sec. 31-32s-23e at Temblor Hills. Depth last reported was near 11,000 ft.

As indicated the other month, Pacific Oil & Gas Development Corporation is ready to put down its Quinn No. 2 test on Sec. 14-25s-27e in Kern County's Jasmine sector. Krug Drilling Company was awarded drilling contract.

Ohio Oil Company's KCL-A No. 72-4, world depth record well on Sec. 4-32s-26e in the Paloma field, is continuing to chew even deeper and last was reported around 21,200 ft., plus or minus. Efficiency of the rotary rig brings to mind that this type of drilling outfit first was recognized in the country's southwest about the time when the sensational Lucas well was completed at Spindletop in 1901. First used for water wells, two brothers, M. C. and C. E. Baker, are believed generally credited with devising the first rotary outfit in South Dakota in 1886. This rig of yesteryear used a single mule for its motivation.

An unproductive depth of 1868 ft. brought an end to Corwin Drilling Company's hunt for new oil with its Wadley No. 1 wildcat on Sec. 17-22s-27e near Porterville, Tulare County.

Atwood-Richfield Development Steady

There is no interruption to orderly development in the Atwood-Richfield area of Orange County. Drilling & Exploration Company added more proof to that by completing its Drilexco-State-Stern No. 4 on Sec. 32-3s-9w on the pump for an initial yield of 400 barrels of oil daily from a total depth of 4965 ft. No. 5 well is drilling below 1500 ft.

General Exploration Company has scored with an important discovery in the Bandini sector in East Los Angeles with its CCMO No. 1 wildcat on Sec. 17-2s-12w. It started off producing at the rate of 500 barrels of 39 gravity oil a day through a 16/64-in. orifice, along with 336,000 cubic ft. of gas daily. Open is the Repetto. The area generally during years past has often been put to test, but, until General Exploration poked into the new pool, efforts were in vain. The drill site is near where Sheila street and O'Neill avenue cross one another on ground obtained by Chanslor-Canfield Midway Oil Company from Bandini Estate. CCMO later sold the surface rights to the Central Manufacturing District, but retained mineral interests. CCMO consequently will be paid royalties by General Exploration. Bolsa Chica Oil Corporation and Basin Oil Company share interest with General Exploration in the new strike, which went to 6765 ft., before plugging back to 6319 ft. Thomas P. Pike Drilling Company guided the venture to successful termination.

Monterey Oil Company at last reports was directionally drilling below 3100 ft. with its Newport Beach No. 1 tidelands test on Sec. 29-6s-10w at West Newport. Santa Maria Drilling Company is doing the work. Incidentally, it was brought out at the recent meeting of the petroleum branch of the American Institute of Mining and Metallurgical Engineers at the Los Angeles Ambassador that more than 20 per cent of the wells currently being put down in California are slant jobs. Newport harbors' 27-acre Linda Isle is about to be developed into a $5,000,000 beach and yachting center, missing nothing from slips to public hotel facilities. Humble Oil shares with Monterey in the offshore test.

At Huntington Beach, Seaboard Oil Company's Thorpe No. 1 test on Sec. 24-6s-11w continues to make progress with the drill near 1000 ft. This is a designated straight hole job, but if successful may be the forerunner of a series of wells into submerged lands.

Placerita Wildcat

Heavier equipment has been installed and work resumed on Western Empire Petroleum Company and L. S. Barnes' Curran No. 1 test on Sec. 20-4n-15w, one and one-half miles north of the Placerita field. Present depth is 2600 ft.

Not far from Newhall, R. E. Bering has spudded and is making hole on down with his Perkins No. 1 wildcat test on Sec. 11-3n-16w.

Under the sponsorship of Shell Oil Company, a northwesterly extension test of the Brea Canyon field is underway on Sec. 34-2s-10w. The well is named Puente No. D-1.

The McNally Ranch near La Mirada station still remains the scene

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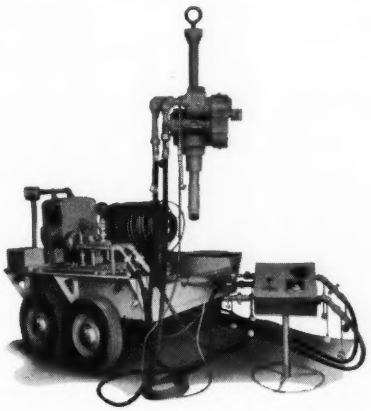
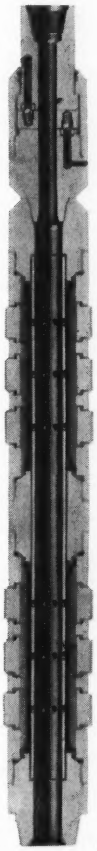
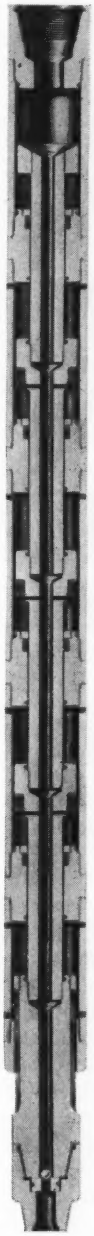


Bowen Powered Swivel



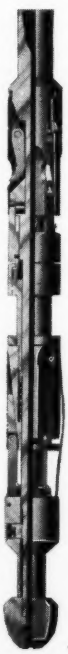
Anchor Section

Bowen-Wilson Pulling Tool



Pulling Section

Bowen-Wilson Pulling Tool



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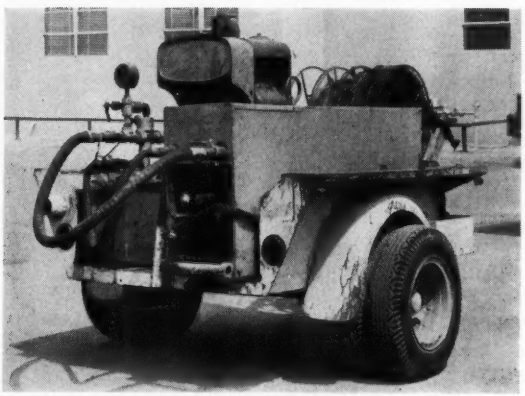

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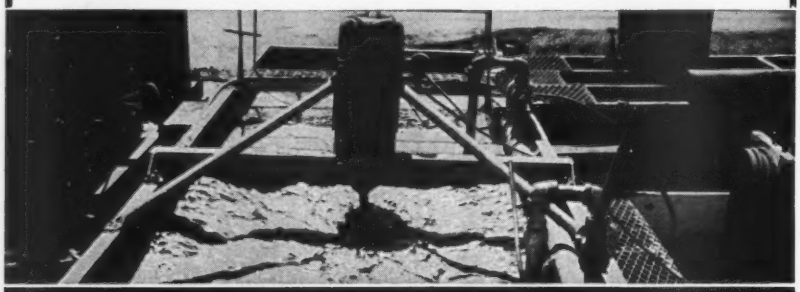

BROWN MUD COMPANY

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of a deep test at this writing. Tide Water Associated Oil Company as operator for itself, is not much above 11,400 ft. with its McNally No. 1-36 wildcat on Sec. 22-3s-11w. Rocky Mountain Drilling Company is doing the drilling chores.

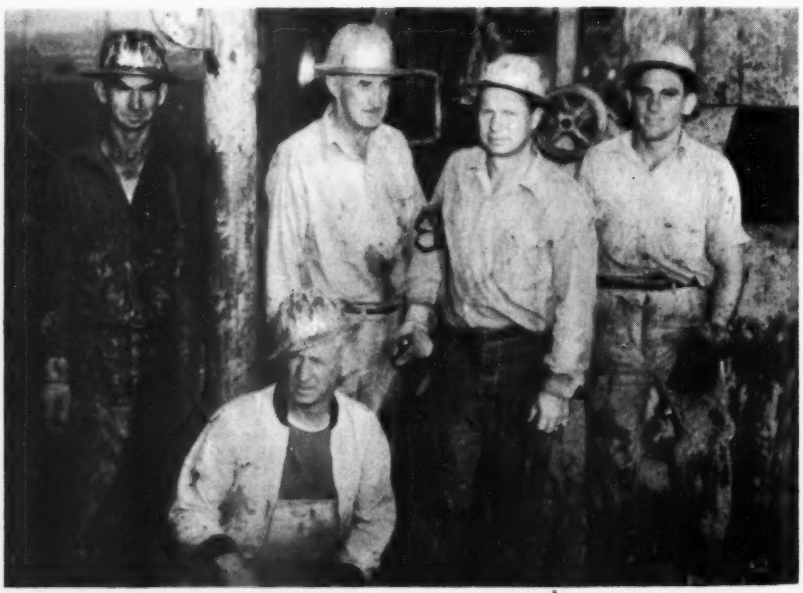
Universal Consolidated Oil Company's test on the Twentieth Century-Fox Film Corporation lot in West Los Angeles is in the whipstock category. All wells put down will be drilled at angles from a single derrick and will be confined to not much more than an acre of ground. The company has constructed a special rig for work on the movie lot. Powered by electricity, the rig will run straightaway off the regular alternating current lines. The majority of modern drilling equipment is Diesel electric. Be that as it may, Diesel generators are not regarded as quiet enough for this area, so Universal Consolidated put together a rig in which both the draw works and pump engines will be electric motors running in a beeline off high voltage wires traversing the district.

Chino Tests Start

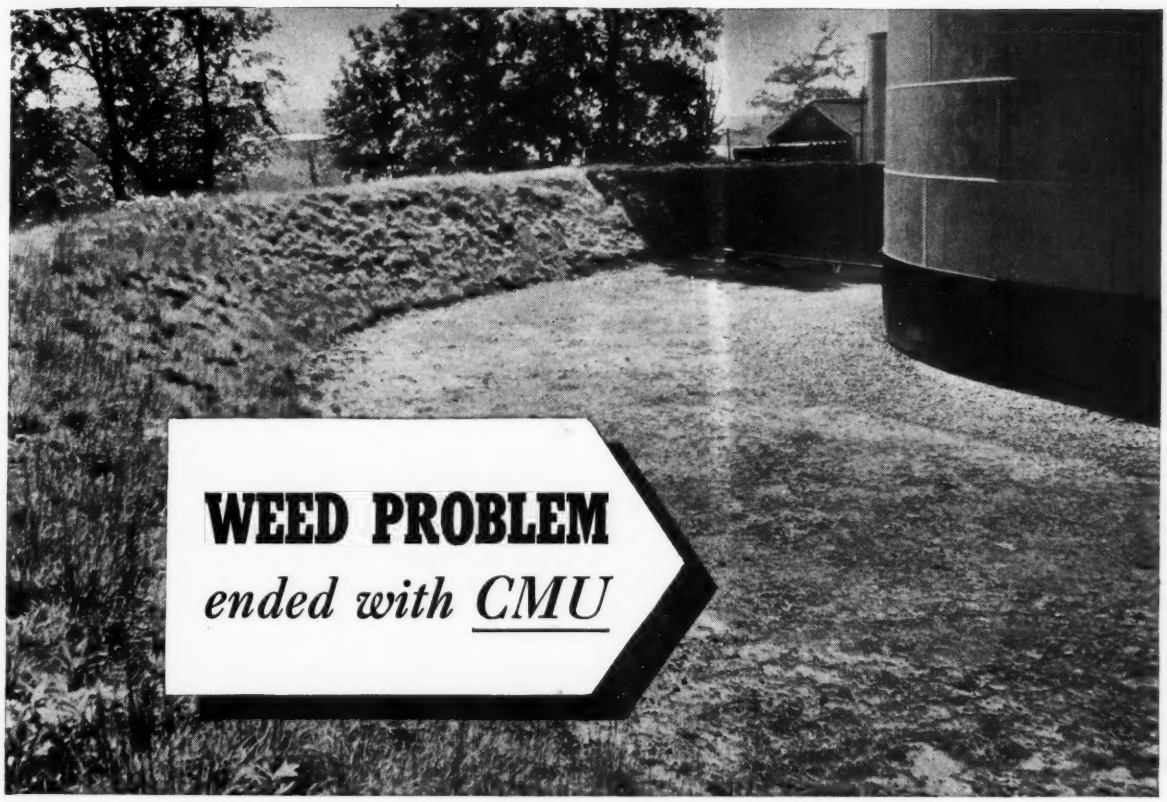
San Bernardino County boasts at present two wildcat wells working in the earlier stages in the Chino area. Lee Drilling Company is the sponsor of a well on Sec. 29-2s-7w. Donald Lamont undertook another wildcat on Sec. 6-2s-7w.

Leffingwell in Los Angeles County has added another producer. Hathaway Company's Lochmiller No. 1 extension test on Sec. 11-3s-11w started off from 8734 ft. with a yield of 300 barrels of gross 35 gravity oil a day.

One of the favorite pastimes of those who have grown up with the petroleum industry in the Los Angeles Basin is to recall the untiring and persistent efforts of pioneers. A real oldtimer recently pointed out that it's more than 60 years ago since Edward L. Doheny and Charles O. Canfield completed their first Los Angeles well from a shallow depth at Colton and Patton streets, just off Glendale boulevard in Los Angeles. The well was bottomed at 145 ft. and only cost some $50 to drill. After deciding the location was favorable to oil production, the operators started a hole with a pick and shovel. When a depth of about eight ft. had been reached, it was found impossible to throw the dirt out by hand and a tripod derrick was then called into play. One end of a rope was fastened to a bucket and the other to a horse. While one shoveled at the top to handle the earth, another led the horse. Initial yield was about 10 barrels of oil a day, which was hauled by horse and buggy to a pipe factory and used to paint the pipe.



The Texas Company's Del Amo No. 2 in the Dominguez field with Santa Fe Drilling Company handling the job. Left to right: Clarence Fletcher, cathead; E. Hill, driller; Wes Kewish, derrickman; Marvin Ballanger, lead tong. (Kneeling): C. E. Thomson, racker.



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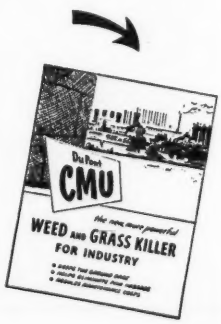

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The well is still pumping and is one of a few left from an original 90. It is surrounded by blooming flowers—white daisies, purple fuchsia and pink hollyhocks. Many observers are of the belief that this discovery well had a pronounced affect on the destiny of Los Angeles by opening a ready accessible fuel supply to expanding industry. Follow-up drilling pushed the oil belt northward and then southwestward close to the Westlake district.

Near the intersection of Cherry street and Wardlow avenue in the Long Beach area, The Texas Company is redrilling its Long Beach Airport No. 1 test on Sec. 20-4s-12w, after plugging back from 5272 ft. to 487 ft. The venture is a designated deep test.

East Cat Canyon Test Well Drills

Santa Barbara County's East Cat Canyon area is being further tested by Slick Moorman Production Company's Palmer-Stendel No. 1-C on 24-9n-33w or some 850 ft. north and 400 ft. east of Palmer-Stendel No. 44A producer. The last mentioned well was completed last July at a plugged depth of 2710 ft. and last was reported putting out 46 barrels of 15 gravity oil from intervals at 2353-2533 ft. and 2632-2704 ft. Slick-Moorman's geologist and engineer is W. W. Porter, II. Drilling is in charge of Orville Stanford Drilling Company.

Union Oil's Los Nietos Company is extending its land holdings in the Waller Park and Santa Maria sectors of the county, where drilling in the general area already has been recorded by the "7600" organization.

Reese H. Taylor, Union president, recently told company employees that a new milepost was reached and passed during last August. "By the month-end, the recorded book value of the company's net assets exceeded 300 million dollars," he said. "These net assets, which have a replacement cost or fair value considerably greater than this book value, represent the share owners' investment in preferred and common stock. The share owners' investment includes earnings retained in the business, but is, of course, net after deducting all debt and current liabilities."

Citing that the pattern of the company's growth is of particular interest, the oil executive added: "Almost 55 years passed from incorporation in October 1890 to April 1945 when net assets aggregated $150,000,000. Yet in the short space of eight years and four months since then net assets have doubled."

At Carpinteria, Intex Oil's Gobernador No. 1 prospect job, Sec. 26-4n-25w, is drilling above critical levels. Tyler & Hamilton's Tyler-Hamilton No. 1 wildcat on Sec. 34-4n-25w is digging below 1150 ft.

Petrolia Test Slated

Having abandoned its Walker No. 1 wildcat well on Sec. 17-1s-2w at Petrolia in Humboldt County, Richfield is preparing to put down another test in the area. Walker No. 1 was carried to a total bottom of 3650 ft. and the final check was a formation test of the interval of 1755-1840 ft. West Coast Oil Corporation has run 7-in. casing in its West Coast No. 1 wildcat on Sec. 16-1s-2w and is ready for conventional tests. Total bottom is 1795 ft., with plug at 1620 ft. In the Al-

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ton area, B-N Development Corporation's Rocha No. 1 wildcat, Sec. 16-2n-1w, was last reported drilling at 7500 ft.

Northeast of Dunnigan Hills in Yolo County, Signal Oil & Gas Company is sidetracking old hole of its Signal-Monterey-Reclamation No. 1 wildcat, after plugging back from a total depth of 5500 ft. to 3720 ft. The drill site is in Sec. 20-12n-1w.

Near Modesto in Stanislaus County, Standard's Young Comm. No. 1 wildcat on Sec. 34-3s-8e is making hole at 6940 ft. Tide Water Associated's Noble No. 1, a wildcat venture on Sec. 29-4n-5w in Sonoma County's Tubbs Island area, is digging at 6660 ft.

In the San Ardo field, The Texas Company has set in motion its Roseberg No. 116 well on Sec. 2-23s-10e, Monterey County. Work is in the hands of Thomas P. Pike Drilling Company.

Union Oil is trying to ferret out new oil near Pescadero Creek, Santa Clara County. There the company's Waugaman No. 1 wildcat continues to bore at 1895 ft. Brown Drilling Company is the contractor.

Drilling has been suspended in Union's Union-Brazos-Ward No. 1 wildcat on Sec. 30-3n-1e in Solano County's Honker Bay area. Total bottom is 8966 ft. and plugged back depth 6950 ft.

At old Timber Canyon in Ventura County, Richfield has pulled out of its West No. 6 on Sec. 14-4n-21w at 6199 ft. The interval of 6056 ft. and bottom at 6199 ft. was tested for negative results.

In the Torrey Canyon area, Union is working over its Torrey No. 92 on Sec. 5-3n-18w, a deeper pool discovery. The project was given the final touch some weeks ago at 14,989 ft. for 117 barrels of net 27.2 gravity oil. The company evidently believes production at present is not representative of the true capacity of the well.

Simi Tests Work

On Sec. 6-2n-18w at Simi, Macson Oil Company of Beverly Hills is digging in the shallower formation with its Strathearn No. 1 explorer. Company geologist is George Roth. R. B. Jackson's R. & G. No. 1 test on Sec. 17-2n-18w is making hole at 2700 ft. Trojan Drilling Company is guiding operations.

Richfield Oil, whose field activities extend to all oil areas in the state, is the sponsor of Jones No. 1 wildcat working on Sec. 36-2n-20w in the Rancho El Conejo area. Before the company is satisfied with the test, drilling will make acquaintance with the 9000-ft. mark.

Standard's Fillmore try on the Sespe Ranch is getting deep. Located on Sec. 27-4n-20w, the bit is down 10,900 ft. or so.

Going back to Solano County, Wa-Me-Co Drilling Company's Tavalero No. 1 wildcat on Sec. 17-5n-1w near Vacaville has been written off at 982 ft. The county, incidentally, boasts the largest Navy establishment in area in the world and also the greatest Army arsenal in the West and the top Air Force base on the Pacific Coast. It may be that members of the oil fraternity would be interested in knowing that Solano County's Benecia is one of California's oldest cities. Founded in 1847, Benecia was named in honor of General Vallejo's wife. Only Sacramento was incorporated earlier.

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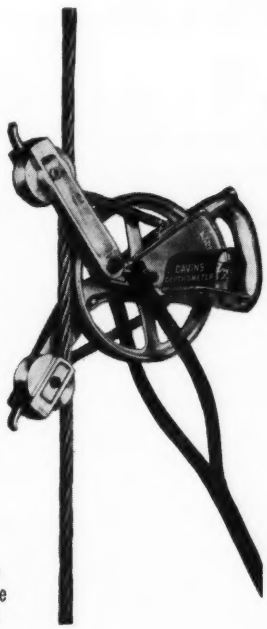

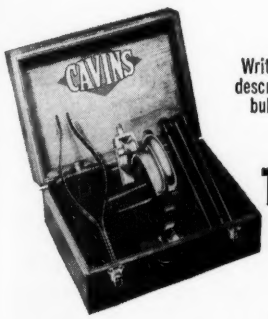

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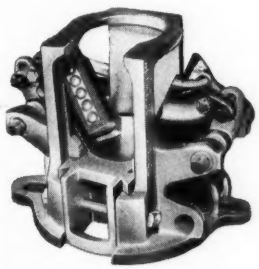

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Rocky Mountain NEWS

Colorado—Idaho—Montana—New Mexico—Utah—Wyoming—Western Canada

Montana

Several new locations have been announced, including two by Stanolind Oil and Gas Co. in the Montana portion of the Williston Basin. Stanolind will drill a 9400-foot Ordovician test in the Pennel Creek area of Fallon County. This will be the No. 1 NPRR "C" in c ne nw 15-9n-58e and will be three miles southeast of Shell Oil Co.'s prolific Cabin Creek discovery. In Dawson County, Stanolind will drill a 11,800-foot Cambrian test, the No. 1 NPRR "E" in c ne se 21-20n-52e. It is staked in the Bloomfield area, and there has been no previous drilling in this sector.

In the Hay area of Fallon County, F. R. Anderson of Denver has announced location for a 9450-foot Winnipeg test on acreage farmed out from Shell Oil Co. It is 18 miles southwest of the Cabin Creek field and is classed as a rank wildcat. The test will be the No. 1 Bohle, c ne ne 20-7n-57e.

Carter Oil Co. was running casing preparing to test shows in the Mississippian and Devonian at the No. 1 Danelson, c ne sw 12-36n-47e, in the Whiskey Butte area of Daniels County. The well was bottomed at 9229 feet.

An extension of the East Poplar field in Roosevelt County is being drilled by Murphy Corp. It is scheduled for 7600 feet as a test of the Devonian and is two miles northwest of other production in the area. The well is the No. 1 Going-Govt. c se se 11-29n-50e.

North Dakota

The Texas Co. has found its first production in the state, with the company's No. 1 Govt.-Dorough flowing 320 barrels of 40 gravity oil and 10 barrels of water through 18/64th inch choke on a 24-hour test. The well opens a new producing area in McKenzie County and is 11 miles south of the Beaver Lodge field in the Williston Basin. It is a mile northwest of Charlson area production. The well was drilled to 8937 feet total depth, and production was through perforations at 8791-8866 feet in the Mission Canyon limestone.

In the Fryburg area of Billings County, a production test of Amerada's No. 1 May recovered 347 barrels of oil in 23½ hours. The well had been plugged back from the Dakota to the Madison, and the test was run from open hole at the interval 9404-29 feet. The well is located in c nw ne 9-139n-100w.

On the eastern flank of the Williston Basin, S. D. Johnson of Wichita Falls, Texas, will drill the No. 1 Werner, sw se 11-158n-63w, in Ramsey County. It is on a farmout from Union Oil of California, Hancock Oil and Signal Oil.

In the Carsin area of Dunn County in the western part of the state, Carter Oil and Sinclair Oil and Gas were preparing to drill the No. 1 Lockwood, se sw 5-147n-93w. It will be a 12,500-foot test.

South Dakota

A 6500-foot test to the basal Lodgepole is scheduled by L. S. Youngblood of Oklahoma City, who will drill the No. 1 Winter, c sw sw 22-22n-19e, in Corson County. The acreage was obtained from Shell Oil Co. which drilled the No. 1 Winter two and three quarter miles to the north but found only pin points in the Madison. Corson County is in the north-central part of the state.

Nebraska

Ohio Oil Co. has found the first commercial production from the J sand in the Doran Field of Cheyenne County, with two drill stem tests at different intervals both providing production. The well is the No. 1 Mohatt, ne se ne 33-14n-50w. The operator recovered 1640 feet of oil, 50 feet of oil cut mud and 50 feet of water, in a test at 4768-75 feet. In a previous test at 4761-68 feet, 340

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feet of oil and 60 feet of oil cut mud were recovered.

New Mexico

The No. 1 Jicarilla drilled by Delhi Oil Co. and Atlantic Refining has produced at a rate of 1,450,000 cubic feet per day from the Pictured Cliffs zone. The well is in ne sw sw 19-26n-5w, in Rio Arriba County. The producing zone was topped at 3100 feet.

Utah

Gulf Oil was drilling below 7300 feet at the No. 1 Brennan Bottom, c ne se 13-7s-20e, in Uintah County after recovery of 1455 feet of oil on a four-hour test of the interval 6863-7008 feet. The wildcat is scheduled as an 8000-foot test. Oil is of 27 gravity.

In the Walker Hollow area of Uintah County, Carter Oil Co. has set casing at 5391 feet and preparing to test what appears to be a commercial black oil discovery, the No. 1 Bamberger Unit, c sw ne 11-7s-23e. Tests have recovered oil of 30 and 31 gravity.

Colorado

The California Co. plans further drilling in the Black Hollow area of Weld County, after bringing in one successful well and encountering 50 feet of saturation in the confirmation. The confirmation, the No. 1 UPRR, ne sw sw 31-8n-66w, was drilled to a total depth of 8958 feet. The No. 1 Baiamonte, the discovery well in this area, produced 304 barrels of oil per day on pump from the interval 8918-40 feet. Production is from the Lyons. The company has announced locations for two additional tests, the No. 1 Colorado State, c se se 36-8n-67w, and the No. 2 UPRR, c ne sw 31-8n-66w.

Continental Oil Co. is drilling the first of three Mesaverde tests in the Urado area of Rio Blanco County in the western part of the state. The well is the No. 1 Govt., ne nw ne 31-4s-103w, and is on a farmout from English Oil Co. Continental also has announced plans for a test of the Weber sand in this acreage.

In eastern Adams County, Sinclair Oil and Gas prepared to test the No. 2 Shea, ne ne sw 14-2s-57w after recovering 1875 feet of oil in a one-hour test of the D sand at the interval 5265-85 feet. The well was drilled to a total depth of 5410 feet but found no shows in the J sand, top of which was logged at 5314 feet.

Crude oil from the highly active Little Beaver-Badger Creek area in the Denver-Julesburg Basin will be transported by a pipeline shortly to be constructed by Sinclair Pipe Line Co. for the Goodall Pipeline Co. The line will be laid to Merino and will hook up with a line operated by Toronto Pipe Line Co. Goodall Co. holds a 55 per cent interest in the new project, and Sinclair 45 per cent. It will be operated by Goodall.

Wyoming

With the tremendous activity in Weston County and attendant need of greater marketing and road facilities, oil producers of the area have organized the Northeastern Wyoming Producers Association. Robert M. Olds of the Olds Oil Corp. of Casper was elected president. Aproximately 100 oil men attended the organization meeting held at Newcastle.

Principal objectives of the association at this time are to work for better market outlets and improved roads. Plains Pipe Line Co., which transports crude from Weston County, has announced a scheduled limit of 75 barrels per well. The company hopes, however, to increase its capacity by installing additional gathering facilities and a new pumping plant.

Weston County continues as the pace maker in the state's drilling activity. Twenty-five new locations were announced in one week recently.

Oil development in Washakie County is expected to be expanded substantially by the unitization of a block by Gulf Oil Co. in the northwestern part of the county. The Fourteen Mile Unit, which has been authorized for unitization, covers 21,331 acres. The company's Phosphoria discovery well, the No. 1 Stockman-Federal, c se nw 2-46n-94w, is among the wells included in the area.

In the Tip Top Unit of Sublette County, General Petroleum was drilling below 4460 feet at the No. 18-20 Unit, sw sw sw 20-28n-113w. On a drill stem test of the Baxter at the interval 4062-4127 feet, gas was recovered at a rate of 76,000 cubic feet per day.

Goshen County continues to remain off the list of oil producing counties in the state but some staining has been found at the No. 1 Govt., c nw se 22-19n-64w. James P. Sloss and S. D. Johnson are the operators. The staining was found in a core at 8337-78 feet.

In Fremont County, Quintana Production has announced location for a 900-foot test of the Mesaverde. It will be the No. 1 Govt., c se se 18-35n-92w.

The Texas Co. will drill a wildcat in the Cottonwood area of Natrona County. The test will be the No. 1 Govt.-Coffman, nw ne ne 15-38n-86w.

Western Canada

Oil production in Alberta reached a seasonal peak of 271,559 barrels daily recently. The figures, for mid-September, were comparable to 176,032 barrels daily for the same period a year previously.

Principal production in the West Drumheller field of Alberta comes from the D-2 Devonian but oil production at lower levels has been encountered in two recent wells. Hudson's Bay No. 2-1 found oil in the Green Shale, which was topped at 5588 feet, and the D-3, which was topped at 5644 feet. Gulf Oil's No. 12-1 also found oil in the D-3.

Williston Oil and Gas is drilling a confirmation to its Bobjo 1-19, discovery in the Forget area. The confirmation is being drilled in 1sd 3 of 19-9-6w2, a half mile west of the discovery.

A program to drill eight development wells in the Marshall area of Saskatchewan has been announced. Three Edmonton companies, Dominion Leaseholds Ltd., Dominion Minerals Development Ltd., and Silver City Petroleums Ltd., will join in the project, which is 10 miles southeast of Lloydminster.

Colorado Operator Own Divining Rod

A yarn from Denver tells of a Colorado operator who figures he's his own divining rod. The oilman has contact dermatitis and blossoms out with a rash when close to petroleum products. He said he is going to keep moving around until "I can bring in a blister."

A. O. Smith Completes New Plant

A manufacturing plant so immaculate that even its 41,000 square foot floor surface is fully vacuum-cleaned every 24 hours has other cleanliness features which make it fit like a glove in this heartland of the tidy Pennsylvania Dutch.

Construction and equipment details which make it the most modern plant existing for its purpose either bar dust and dirt from entering or chase it out of the new Eastern Welding Electrode Plant of A. O. Smith Corp. near Lancaster.

In spending a million dollars to build and equip the plant, the Milwaukee steel fabricating firm has a major purpose—to create ideal conditions for the "perfect" manufacture of welding electrodes.

Perfectly uniform electrodes—which are desirable in obtaining stable and uniform welds—can be turned out one after the other under hygienic laboratory conditions. The trick is to mass-produce the electrodes by the millions under factory conditions.

For example, if a small piece of dirt or extraneous material becomes lodged in the extrusion press which squeezes out the rods, it will cause imperfections which will affect the performance of that whole rod batch.

With rods going through the extrusion press at a rate of 20 per second (twice as fast as the firing rate of a machine gun) it should be apparent that a lot of damage can be done in a very short time.

Meticulous weighing and measuring of materials going into the manufacture of electrode coating at Lancaster plant is part of the high uniform quality attained. Here a workman weighs out part of the dry mix. Note that the scale instead of being calibrated is set with a terminal point for the weigh, reducing the possibility of the operator mis-reading. Also each electrode batch has its own card on file and each material going into the mix has a lot number which is punched out by the operator on the control panel buttons seen in rear. This makes for coded identification of every material used in each sequence of production. It makes the tracing of a defective lot much simpler.

Along with its study of optimum manufacturing conditions in its new plant, A. O. Smith's Welding Products Division sought to produce also the best possible conditions of plant safety, comfort and efficiency and the lowest maintenance costs.

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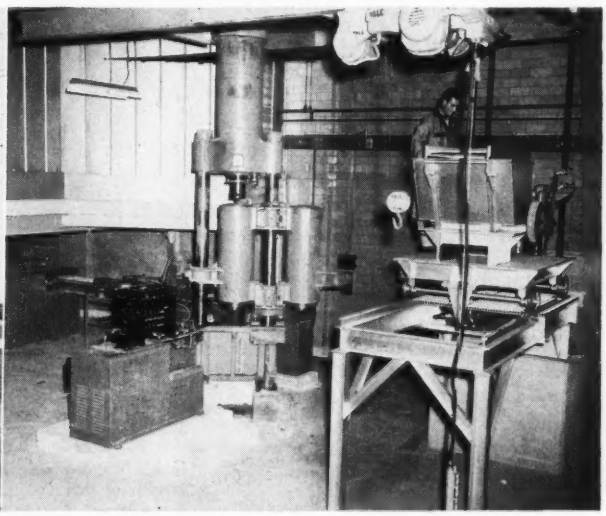
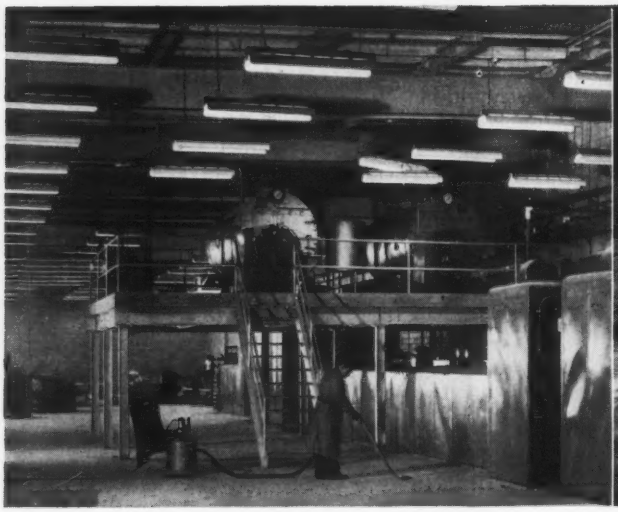
Incoming air is filtered to remove all possible contamination from it—this despite the rural location of the plant. Such air as is exhausted is passed through a wet type rotoclone and washed to re-

This is the exterior front view of A. O. Smith Corporation's Eastern Welding Electrode plant near Lancaster, Pa. The plant proper, containing 41,000 sq. ft. of space, is uniquely constructed with no windows or skylights in order that a completely controlled air flow may be maintained with a maximum emphasis on the exclusion of dust and dirt or other extraneous material that will cause imperfections in electrode manufacture.



Operator in background is feeding the slug press which forms long clay-like molds of electrode coating material from the wet mix. These slugs then are fed into the extrusion press (cylinders at left) which forms the coating on the rods at the rate of 20 per second, then feeds the coated rods into the baking oven.



To keep a dirt-free plant as clean as possible, the entire 41,000 sq. ft. floor area is vacuumed every 24 hours at least. Tile wall surfaces minimize dirt adherence and fixtures are so positioned that the "scrubbing down" process is unimpeded on any surface.

Handling of the raw materials going into electrode coating mixes is greatly expedited by the use of a novel "merry-go-round" or "Lazy Susan" turntable. An operator on the outside platform loads the segments of the "Lazy Susan" with various elements. Then the workman at the dry mix weighing station (seen through door) selects what he needs from the revolving table. The device was designed and built by A. O. Smith Corp.

move any possible dust. This adds to the insurance that all outside air will be pure before admitted to the plant.

Further contributing to cleanliness in the plant, propane gas is used for both the baking oven and for heating the building.

Every effort is bent to insuring the uniformity of materials, both as to weight, mixture and application in the manufacture of welding electrodes in the new A. O. Smith plant.

Because even a slight absorption of moisture by the dry mix can disturb the accuracy of the formula for the coating applied to the wire, the silicates used are stored underground at constant year-round temperature of 55 degrees Fahrenheit. And an air conditioned room in which hygroscopic materials are stored insures the unvarying amount of moisture in these materials and consequent uniformity of mixes.

All fixtures in the employes' wash rooms, locker room and lunch room are hung from the ceiling or protrude from the walls in such a manner that cleaning of the floors can be done often at minimum cost.

All these mechanical features to insure maximum perfection in production of electrodes are backed up by a statistical quality control program designed to spot flaws in production almost as quickly as they begin to occur. This control program guards the integrity and uniformity of the electrodes right to the consumer's door.

Decision to locate the new plant at Lancaster was based on several factors. One of these was the strained capacity of the Milwaukee A. O. Smith plant to produce electrodes in the quantity required to meet the sharp increases in sales—increases much sharper than the industry as a whole since World War II ended.

In the baking process electrodes move the length of this 150 ft. modern baking oven three times. Six control zones and a complex control system regulate variables such as air distribution, zone humidity and zone temperatures. As can be seen, multiple door openings make every part of the baking process accessible for frequent visual inspection and for quick clearance of oven jams.

And once the need of a new plant was apparent, it was economically advisable that it should be located within close distribution distance of the eastern and southeastern markets for electrodes. The eastern metalworking market alone comprises about one-third of the potential electrode business.

In the 1946-1952 period the Welding Products Division of A. O. Smith Corp. has redesigned its welding machine line and broadened the electrode line to offer complete service to any customer. A welding accessory sales program has gained excellent acceptance.

The result has been that in the same six year period A. O. Smith welding products sales have soared 179 per cent while the industry as a whole rose 69 per cent. And today, although concentrating on a half dozen Middle Western states, the company has captured approximately 15 per cent of industry sales.

With the uniform quality production and quick delivery potentials of its new Lancaster plant, the Welding Products Division envisions a much healthier slice of the pie in the near future.

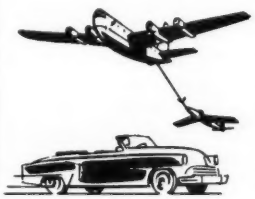
Conserve

–to Webster meant

"to keep in a sound or safe state"

to an Oil Man means...

–To treasure the natural resource–OIL. Through self-regulated drilling, through continual improvements in refining so that more products can be produced from the same barrel of crude, and through always upgrading distribution, you get much more for your petroleum dollar today than you did 25 years ago.



–To maintain the unbroken record of low-cost, high quality products delivered to our country and the free world in time of peril. Yet to safeguard the fuel that today supplies 62 per cent of America's industrial power.

–To preserve the right of individual initiative by fostering rigorous, aggressive competition that means a constant supply of gasoline and oil, nearby, at low cost for you.

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Bechtel Corporation Awarded Shell Contract For Anacortes Refinery

The general contract for construction of Shell Oil Company's 50,000 barrel refinery at Anacortes, Wash., has been awarded to the Bechtel Corporation, a leading West Coast construction firm, it was announced recently by F. S. Clulow, Shell vice-president in charge of manufacturing.

He said that over-all planning and preliminary engineering, which constitute a big part of the job, have been under way for some time. The actual field construction of the refinery units will start about the middle of 1954, according to Clulow, since further engineering and purchasing of equipment and material for the units will take from six to nine months. He said that much of the equipment and material, except specialized units unavailable in the area, will be purchased in the Northwest.

According to R. W. McOmie, Shell's West Coast refinery co-ordinator, clearing of the 700-acre site will begin shortly and is scheduled to be completed by mid-1954. Then the next steps will be grading land and constructing drainage facilities, roads, wharves and temporary buildings. McOmie said that he expected the Bechtel Corporation to award a number of sub-contracts to local firms for this work.

The major refining units will consist of a crude oil fractionating unit, a platformer and a catalytic cracker. The crude unit and platformer (which gets its name from the process of reforming petroleum molecules in the presence of a platinum catalyst) will be finished by the middle of 1955 and the remaining units, including the "cat" cracker, by the end of 1955, McOmie said.

The first units, however, will be put into operation before the entire refinery is completed, McOmie added, permitting the plant to produce its first manufactured products earlier. It is expected the first products will begin to come off the line about mid-1955.

McOmie said the Bechtel Corporation would be in charge of employment of the construction crews, and it is expected all except specialists would be hired locally. He said that at its peak the construction force would number about 1,500 men.

Leasing Laws Study Subject

The National Petroleum Council has consented to carry out a wide study of discordance between the General Mining Laws and the Mineral Leasing Act. Requested by Secretary of the Interior Douglas, recommendation will duly be made to the Secretary relating to an answer to the problem which will be agreeable to both the oil and gas industry and the mining business, according to Frank Rogers, Western Oil and Gas Association Washington representative. A. C. Mattei, Honolulu Oil Corporation president, and chairman of the Western Oil and Gas Association public lands committee, was named chairman of a new committee to conduct the study by Walter S. Hallanan, NPC chairman. The committee is expected to report at the next Council meeting in early December. The Council forthwith will pass on its recommendations to the Secretary with the intention of obtaining proper action early in the next session of Congress, convening in January.

Arizona Oil Hunt Promising

Of some 125 oil and gas test wells already put down in various parts of Arizona, at least 45 have picked up oil and gas showings, although they were below commercial worth. The first exploratory hole was drilled in the state 50 years ago in Yavapai County to approximately 2000 ft., with oil showings reported. Arizona is the fifth ranking state in land area in the country, embracing 113,909 square miles. In view of this, Arizona cannot be given up as commercially unproductive until widespread and additional drilling has been conducted. The extensive oil hunt in Arizona is regarded as comparable to the experience of North Dakota, which became the 27th producing state two years ago only after holes had been punched down in countless numbers in the state.

Petreco Announces Sediment Separator for Hydraulic Pumping Power Oil

The Petreco division of the Petrolite Corporation has announced the development and commercial application of an electric sediment separator for the purification of hydraulic pumping system power oil.

In commercial use, the Petreco Separator has reduced the BS&W and sediment content of power oil for hydraulic pump systems to such a low percentage that engine end efficiency has been substantially increased. On one lease, where sediment in the power oil had necessitated pump pulling and repairs every four or five months, the production engineers estimate that pumps will now have to be pulled only once in three years, and then primarily to insure against "freezing" in the well.

The Petreco Sediment Separator processes the crude (to be used as power oil) after it has been dehydrated by one of the conventional commercial demulsifying processes. The powerful electric field in the separator precipitates the residual moisture and solids, the clean power oil passing on into the hydraulic pumping system. In one typical installation, the removal percentage of BS&W was 96% and the solid materials were reduced 75%.

The Petreco Electric Sediment Separators are made available by the Petreco Divisions of the Petrolite Corporation, 1390 East Burnett Street, Long Beach 6, California, and 3202 South Wayside Drive, Houston 1, Texas.

Arizona Leases Spreading Wide

Upwards of 100 operating organizations are among holders of lease blocks comprising more than 5000 acres in Arizona. Participants include Shell Oil, Humble Oil & Refining, Carter Oil, Superior Oil, The Texas Company, Kerr-McGee Oil, Standard of California, Phillips Petroleum and Amerada Petroleum.

Formation Logging Service Expanded to South America

E. F. Peters, late in September, began expansion of his Formation Logging Service to include South American countries when he dispatched Al Gritseff and Charles R. Johnson to a location near Medillin, Colombia, and Bob Allen and Glenn Prosser to Peru to begin preliminaries for servicing wildcat wells for one of the major oil companies.

On Saturday, October 10th, via Pan American Air Lines Howard Dohlen and Bill Schilling left for Colombia and Jim Padick and Bob Peckham for Peru to complete these two crews that are initiating formation logging in the two South American wildcat locations.

Florida Scene of Deep Exploration

During recent years, representatives of several California operating organizations have given attention to what Florida may possibly offer in new petroleum. In view of this, it is probably worthy of note that Gulf Oil Corporation and Coastal Caribbean Oils, Inc., are preparing to put down a deep exploratory well in the Charlotte Harbor area of Florida's west coast, about 10 miles southwest of Punta Gorda in Charlotte County. Pooled land of the companies in the area totals about 14,000 acres and the test is due to go to 12,000 ft.

Mr. Earle F. Demond, Vice President and General Manager of Exeter Oil Company, Ltd., died suddenly at Newport Beach on Saturday, September 26, while vacationing with his family. Mr. Demond, 54, was very active with Exeter Oil Company, Ltd., as an officer and director, since its incorporation in 1926.

George Anthony, West-Marquis Advertising Agency at Los Angeles, is the proud father of a bouncing baby boy. Anthony works on the General Petroleum Corporation account.

Permanente Cement Declares Dividend

Permanente Cement Company directors declared the regular quarterly dividend of 35 cents per share, payable October 30, 1953, to stockholders of record at the close of business October 16.

This brings per share dividend payments for the first three quarters of the company's fiscal year to $1.05, compared with 90 cents for the comparable period a year ago.

Henry J. Kaiser, president, pointed out that the Permanente plant has been operating at full capacity all year, and cement inventories are now lower than they were a year ago at this time. Demands for cement continue to be good in all of the company's sales territories, which include California, Washington, Oregon, western Nevada, Alaska, and Hawaii, Mr. Kaiser said.

Bishop Oil Co. Policies Discussed

Bishop Oil Company policies and operations were widely discussed by officials with representatives and members of the Los Angeles Stock Exchange at a meeting at the Los Angeles Biltmore. Louis J. Brunel, vice president and manager of Bishop, told the group that three types of "deals" appeal to the company, namely: 1. Acquisition of producing properties, provided the lands are close to current production of the firm. 2. Drilling on offset wells for an interest. 3. Acquisition of properties which point as possible extenders of established oil fields. It was revealed that Bishop reserves amount to about 9,000,000 barrels of crude oil, of which California accounts for approximately 65 per cent.

Linden G. Collier has been advanced to Shift Foreman for General Petroleum Corporation's Torrance (Calif.) refinery. He had been Asphalt Plant Foreman at the company's Vernon (Calif.) refinery since 1948.

Colliers' oil company service dates back to 1923 when he was employed by the Gilmore Oil Co., which was consolidated with General Petroleum in 1946.

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THIS

LAUGH

OFF!!

A school teacher telephoned the mother of one of her pupils. "He swears terribly on the playground."

"Jes lak his ol' pappy!"

"And besides that, he slaps all the little girls."

"Jes exac'ly lake his pappy!"

"And he steals!"

"Jes the spittin image of his pappy, inside and out. Lawsy! I sho is glad I didn't marry dat man!"

Judge: "Is your wife dependent on you?"

Defendant: "Yes, judge, she sure is. She would starve to death if I didn't bring her washing to do."

A man was carrying a grandfather clock under his arm, taking the clock to be repaired. Turning a corner, he walked head-on into an inebriated gentleman, and they both went sprawling to the sidewalk.

"Why don't you look where you're going?" said the sober one.

"Oh, yeah?" said the drunk. "Why don't you carry a wrist watch like everybody else!"

Prosecutor: "Now tell the jury the truth, madam. Why did you shoot your husband with a bow and arrow?"

Defendant: "I didn't want to wake the children."

"What's a professor, Daddy?"

"A professor, my dear is a man who tells his students how to solve the problems of life which he avoids by being a professor."

"I feel as if I had known you for years."

"You certainly do."

Since the seats of new cars
Get wider and wider,
What excuse can we give
To squeeze closer beside her?

There are two kinds of women—those who wish to marry, and those who have not the slightest desire not to.

Mechanic: "My advice is to keep that car of yours moving."

Owner: "Why?"

Mechanic: "Well, if you ever stop, the cops will think it's an accident."

A woman is a person who will spend $10 on a beautiful slip and then be annoyed if it shows.

A co-signer is somebody able to pay for something somebody else wants.

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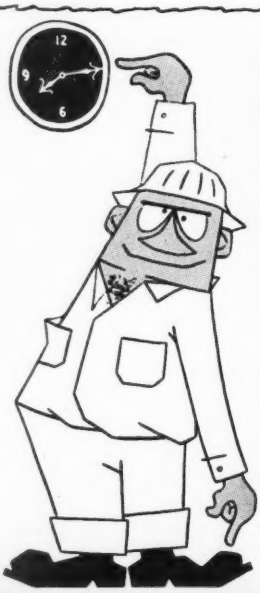

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